Instructor: Dr. Haiyan Jiang; Office: PC 342B; Phone: 305-348-2984; Email: haiyan.jiang@fiu.edu.
Time: Tue/Thu, 9:30 AM-10:45 AM
Location: Ziff Education Bldg 150
Office hours: Tue&Thu, 11:00 AM-12:00 PM or by appointment
Course Web Site: http://www2.fiu.edu/~hajian/OCE3014/OCE3014.html

**Course overview:**

This course deals mainly with the three of the four branches of *Oceanography*, namely: 1). *Geological Oceanography*: where we will discuss the study of the structures of the ocean floor and the creation, evolution and ultimate disappearance of sea floors. We will also study the origin and properties of different type of sediments deposited on the ocean floor. 2). *Chemical Oceanography*: we will discuss the chemical composition and unique properties of sea water. 3). *Physical Oceanography*: we will study the formation of tides, waves and ocean currents, the ocean-atmospheric relationship that influences weather and climate as also the physical properties of sea water and how the modern technology studies the oceans. We will also study how the humans are affecting our oceanic environment.

**Textbook:** ***Essentials of Oceanography*** (10th Ed) by Harold V. Thurman and Alan P. Trujillo. Prentice Hall.

**Grading:**

The final numeric grades will be determined according to the following table:

| | |
|---|---|
| Class participation | 10% |
| Midterm Exam #1 | 30% |
| Midterm Exam #2 | 30% |
| Final exam | 30% |
| Total | 100% |

***Attendance:*** Attendance is worth 10% of the class grade. I will take attendance on five random days. Each of those will count for 2 points.

***Religious Holidays:*** Please check the exam days and make sure those days do not clash with your religious holidays. You must discuss any alternate arrangements during the first week of the class. It will not be possible to make alternate arrangements afterwards.

***Exam Policy:*** There will be two midterms (30% each) and one cumulative final exam (30%)—***No makeup exam will be given. If you miss an exam, I'll assume you received zero in that exam and will drop that grade. If you miss more than one exam, you get a failing grade in this course.***

**Course lectures:**

Electronic portions (pdf files) of course lectures will be provided on the class website for download after the lecture is given so that you can review. Notes on the board may or may not be posted, so if you miss class, please see a fellow student.

**Electronic Devices in the Classroom**:

Please turn off all cellular telephones and pagers during class time – this includes text messaging. If your work situation requires that you be on call, please notify the instructor prior to class. Text messaging is not permitted in

this class. You are only permitted to use a laptop during class to take notes, or to access resources related to the course such as the powerpoints, web links, Google Earth, or the etext. Laptops may not be used during class time to answer email, browse the web, listen to music, or any other activity not related to class. If you are using your laptop for one of these unauthorized activities, I may simply note who you are and contact you after class rather than interrupting the class to notify you. If you are disrupting other students you will be asked to leave the lecture hall.

**University Policy on Academic Misconduct:**

Florida International University is a community dedicated to generating and imparting knowledge through excellent teaching and research, the rigorous and respectful exchange of ideas, and community service. Therefore, all students are expected to adhere to a standard of academic conduct, which demonstrates respect for themselves, their fellow students, and the educational mission of the University. All students are deemed by the University to understand that if they are found responsible for academic misconduct, they will be subject to the Academic Misconduct procedures and sanctions, as outlined in the Student Handbook.

**Course Outcomes:**

This course will give you a broad but well rounded knowledge of the earth's oceans and introduce you to the scientific principles underlying the oceanic phenomenon which in turn will help you understand how the oceans 'work'.

| **Tentative course schedule:** | | **Reading** |
|---|---|---|
| Aug 21(T) | Introduction | Chapter 1 |
| Aug 23(Th) | Origin of Solar System, Earth and the oceans Introduction | Chapter 1 |
| *(Aug 27 Last day to drop course without damage)* | | |
| Aug 28 (T) | The Origins of Oceanography and modern ocean exploration | Chapter 1 |
| Aug 30 (Th) | Plate Tectonics | Chapter 2 |
| Sep 4 (T) | Plate Tectonics | Chapter 2 |
| Sep 6 (Th) | The Ocean Basins: Physical Features | Chapter 3 and Appendix 2 |
| Sep 11 (T) | Sea water: Origin and Chemical Properties | Chapter 5 |
| Sep 13 (Th) | Sea water : Physical Properties | Chapter 5 |
| *(Sep 14 Last day to withdraw from the University with a 25% refund of tuition)* | | |
| Sep 18 (T) | Marine Sediments | Chapter 4 |
| Sep 20 (Th) | Marine Sediments | Chapter 4 |
| Sep 24 (T) | Overflow and Review | |
| Sep 27 (Th) | **Midterm1 (Chapters 1- 5)** | |
| Oct 2 (T) | Atmosphere, Greenhouse Effect, Global Warming | Chapter 6 |
| Oct 4 (Th) | Ozone Hole, Ocean and Climate: El Nino | Chapter 6 |
| Oct 9 (T) | Currents: Surface circulation | Chapter 7 |
| Oct 11 (Th) | Currents: Deep water circulation | Chapter 7 |
| Oct 16 (T) | Waves | Chapter 8 |
| Oct 18 (Th) | Review | |
| Oct 23 (T) | **Midterm 2 (Chapters 6, 7, 8)** | |
| Oct 25 (Th) | Tides | Chapter 9 |
| *(Oct 29 (M) Deadline to drop a course with a DR grade. Deadline to withdraw from the University with a WI grade.)* | | |
| Oct 30 (T) | Tides | Chapter 9 |
| Nov 1 (Th) | Coast: Beaches | Chapter 10 |
| Nov 6 (T) | Coastal Beaches | Chapter 10 |
| Nov 8 (Th) | Coastal Ocean | Chapter 11 |

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|---|---|---|
| Nov 13 (T) | Coastal Ocean | Chapter 11 |
| Nov 15 (Th) | The Oceans and Climate Change | Chapter 16 |
| Nov 20 (T) | The Oceans and Climate Change | Chapter 16 |
| Nov 22 (Th) | Thanksgiving Holidays, **NO CLASS** | |
| Nov 27 (T) | **Review** | |
| Nov 29 (Th) | **Final Exam (cumulative)** | |