

West Los Angeles College
Oceanography 001 – Section No. 1633
Fall Semester 2013
Instructor: Dr. Shapoor Hamid
Saturdays from 9:35 AM to 12:50 AM
Location: MSA 302
Course Syllabus

Objective

The students are introduced to the general field of oceanography, including a study of the features of the sea floor, the chemical and physical properties of sea water, currents, tides, waves and their effects on marine organisms, and life in the ocean. Special reference is made to the Southern California environment and the problems of people and the sea.

Course Description

Oceanography is studying earth in general and emphasizes the marine science. It studies origin and history of the ocean, sea floor structure, composition, and sediments. Properties and composition of the sea water. It also studies oceanic air and water circulations, waves, tides, coastal characteristics, life in the ocean, oceanic communities, and uses and abuses of the ocean.

Schedule and Topics

Saturday August 31 (Introduction)

Introduction to Oceanography: Introduction to earth science and oceanography. Introduction to atmosphere, hydrosphere, biosphere, and geosphere. Earth internal and external forces, and earth internal structure. Oceanic floor. Sediments in the oceanic floor. Oceanic circulations. Waves, tides, and coastal area characteristics. Life in the ocean, pelagic and benthic communities, uses and abuses of the ocean and comprehension of geological time.

Saturday September 7 (Chapter 1 and 2)

Origin of ocean: Solar system. Relation of earth with other planets. Origin of earth, ocean, and atmosphere. Life and ocean. Earth future. Existence of other oceans.

History of oceanography: Understanding the marine science history. Advanced oceanic studies. Use of modern technology in oceanography.

Saturday September 14 (Caper 3)

Earth Internal Structure and Plate Tectonics: Earth internal structure; crust, mantle and core. Lithosphere and Asthenosphere. Plates and plates motion. Continental drift and Wegener idea. Sea floor spreading. Confirmation of plate tectonic. Plates boundaries- subduction zones, mid-oceanic ridges, and transform faults.

Saturday September 21 (Chapter 4)

Ocean Basins: Mapping oceanic floor. Oceanic-floor topography. Continental margins and their elements: Continental shelves, slopes and rises. Submarine canyons, and deep ocean basins. Abyssal plains. Mid-oceanic ridges. Guyots and seamounts. Oceanic trenches.

Saturday September 28 (Chapter 5 and 6)

Sediments: Sediments appearance. Marine sediments classification by origin: Terrigenous, Hydrogenous, Biogenous, and Cosmogenous. Marine sediment classification by location: neritic and pelagic sediments. Historical records of oceanic processes.

Water: Water molecule. Thermal characteristics of water. Solvent properties of water. Acid-base balance. Density stratification of ocean. Effects of light and sound in ocean.

Saturday October 5: 1st Midterm

Saturday October 12 (Chapter 7, and 8)

Atmospheric Circulation: Atmosphere and ocean interaction. Weather and climate. Atmospheric composition. Effect of solar heating. Atmospheric movements. Coriolis effect. Monsoons, storms, and hurricanes.

Ocean Circulation: Mass flow of oceanic water. Surface currents, Role of wind and gravity. Movement of oceanic water. Water masses. Thermohaline circulation. Study of currents.

Saturday October 19 (Chapter 9 and 10)

Waves: Waves energy and classification of waves. Waves elements. Effects of depth on waves. Deep-water and shallow-water waves. Relation of waves and density. Tidal waves. Tsunamis and seismic waves.

Tide: Tidal waves. Causes of tides. The moon and sun effects. Tidal Datum. Prediction of tides. Tidal effect on marine organism. Tides and power generation.

Saturday October 26 (Chapter 11)

Coast: Coastal area. Coastal erosional processes. Types of coasts. Erosional and Depositional coasts. Beaches, longshore currents and drifts. Rip currents. Spits and bay mouth bars. Barrier islands. Deltas. Biological activities in coastal areas. Estuaries, their origin and classification. Human activities in coastal areas.

Saturday November 2: 2nd Midterm

Grading System:	90%-100%	A
	80%- 89%	B
	70%-79%	C
	60%-69%	D
	59% & below	F

Midterms: Worth 30% of grade (15% each).

Final: Worth 70% of grade.

Extra Credit: Topic related to any of the Chapters

Sources: CD ROMs, Videos, Internet Research, Museums, Field Trips.

A final report should be prepared that includes introduction, body of information and conclusions.

Attendance Policy:

Roll will be taken. There is a strong correlation between poor attendance and poor grades. **You are responsible for information, exam announcements, date changes, etc. presented in class, whether or not you are present**

Students who are given add slips must complete the process by the 3rd class meeting. No replacement add slips will be signed.

No cell phones and pagers should be activated. They are very disruptive! If you are expecting a 'very important, i. e. more important than being in class, phone call', then by all means stay home and wait for it.

Withdrawal from Class:

Students are responsible for their credit and enrollment status. Any student withdrawing from class must inform the admissions office of this decision. **Students failing to follow the correct procedure for withdrawals will receive a grade of "F" for the semester. No withdrawals are permitted after the day indicated in the schedule section of the Catalog.**

(see schedule page)

Cheating/Academic Dishonesty:

Each student is expected to do his/her own work on all assignments, reports, examinations, etc.

Here is a list of some actions that are considered cheating:

NO TALKING DURING THE EXAM.

KEEP YOUR EYES ON YOUR OWN EXAM.

Saturday November 9 (Chapter 12)

Life in the Ocean: Unity and diversity. Photosynthesis and Chemosynthesis. Organic complex organization. Physical and biological environmental factors. Temperature, nutrients, salinity, and hydrostatic pressure. Marine environmental zones. The concept of evolution and oceanic life. Marine organism communities and the cause of their mass extinctions.

Saturday November 16 (Chapter 13)

Pelagic Communities: Location of Pelagic communities. Planktons and Phytoplankton. Diatoms, and Dinoflagellates. Nekton communities: Shrimps, sharks, fishes, and marine mammals.

Saturday November 23 (Chapter 14)

Benthic Communities: Benthic organism and sea floor. Distribution of benthic organism. Seaweeds and marine plants. Salt marshes and estuaries. Rocky intertidal communities. Sand beach and cobble communities. Tropical coral reef communities. Population of deep-sea floor and vent communities. Communities around whale falls.

Saturday November 30: Thanksgiving Holidays (College is closed)

Saturday December 7 (Chapter 15 and Review)

Uses and Abuses of the ocean: Marine resources: Sands and gravel. Salts and fresh water. Renewable and non-renewable energy. Sources of energy in the ocean. Marine biological resources. Non-extractive resources. Law of the Sea. Marine pollutants and oceanic contamination.

Review for the final Examination.

Saturday December 14: Final Examination

In addition to the above program, extra credit for this course includes viewing of the video tapes and CD-ROMs related to Oceanography. Also, going to a geological or natural history museum and writing a report or writing a paper about earth science related to oceanography count for extra credit.

Text Book:

Essential of Oceanography (Latest Edition)

TOM GARRISON

Pre-class reading assignment: Read the chapters with the topics for each class before the class meeting.

USING NOTES OF ANY KIND (ON CARDS, STRIPS OF PAPER, DESK TOP, ETC.) DURING AN EXAM IS NOT PERMITTED.

Showing a fellow student your exam, or passing information in any way is not permitted.

Place your answer sheet(s) directly in front of you.

If you have a question, quietly raise your hand.

Translation dictionaries are not permitted.

Turning in someone else's work is not permitted.

Exiting the room during the exam is not permitted.

Providing your work for someone else to copy is not permitted.

WLAC Standards of Student Conduct

Violators of the WLAC Policy on Student Academic Honesty are subject to disciplinary action. Depending upon the seriousness of the violation, the disciplinary action may be any or all of the following:

- The instructor may warn the student that the conduct is a violation of the WLAC Policy on Student Academic Honesty.
- The instructor may give a zero score or an "F" grade for the assignment or exam. In the case of assignments which are not averaged into the course grade (such as extra credit assignments) the penalty may be the subtraction of the points the assignment is worth.
- The instructor may report in writing the academic dishonesty incident to the Office of Student Services to be placed in the student's disciplinary file.

The instructor may send a written report to the Office of Student Services about the student's violation of the Standards of Student Conduct (LACCD Board Rule 9803.12), and request that the college initiate disciplinary action leading to the suspension of the student from the college or the expulsion of the student from the college and the entire district as authorized by LACCD Board Rule 91101.11b. In all instances, the student has the right of due process when charged with a violation of the Standards of Student Conduct. Details of the Student Grievance Procedure may be found in the West Los Angeles College catalog and in the Schedule of Classes in the section on student conduct.

Office Hours: Saturdays 8:30 to 9:30 MSB Room No. 211

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