Division: Science
Course name: Oceanography 001
Section: 1634
Semester: Spring 2014

Instructor: Dr. Shapoor Hamid **School Website: www.wlac.edu**
Class Hours: Saturdays **Address: 9000 Overland Ave., Culver City, CA 90230**
9:35 a.m. – 12:50 p.m. **Location: MSA 302**

Office Hours: Saturdays **Instructor E-mail: hamids@wlac.edu**
Before classes: 8:30 – 9:30 **Location: MSB 211**

Welcome

This semester, you be introduced to the general field of oceanography, including principals of earth science, plate tectonics, earth internal structures, study and 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 will be made to the Southern California environment and the problems of people and the sea. YOU CAN DO IT and I'm here to help.

Course Description:

Oceanography 001 (Oceano 001) is intended to provide students with a comprehensive picture of the world ocean with a multi-disciplinary approach that involves the ocean's chemistry, physics, geology, meteorology, and biology. The course includes the following major topics: origins and history of oceanography, Earth structure, plate tectonics, ocean basins and sediments, chemical and physical characteristic of water, circulation of the oceanic water and the atmosphere, waves, tides, coasts, marine life, pelagic and benthic communities, marine resources, and the use and abuse of the ocean.

This course will help students to understand how the earth system works. It also provides knowledge and credit for the US/CSU systems.

Required Text Book

Text Book:
Essential of OCEANOGRAPHY
TOM GARRISON, ISBN-13-978-0-8400-6155-3

Recommended Materials

Essential of Oceanography Sixth Edition
DVD-ROM

Required Materials

- 1 Note Books for lectures
- 8 ½ x 11 notebook paper (plenty)
- Pencils, blue or black pens, and highlighters

Course Objectives:

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

A. Origin of the Earth and the Oceans
B. Interior of the Earth and Seismic Method
C. Continental Drift, Seafloor Spreading, and Plate Tectonics
D. Ocean Basins
E. Properties of Seawater
F. Marine Sediments, Classification and Uses
G. Atmosphere, Atmospheric Circulation, Weather
H. Ocean Surface Currents, Vertical Circulation
I. Ocean Waves, Tsunamis, Properties and Behavior
J. Ocean Tides
K. Coasts, Coastal Processes, Features, and Structures
L. Marine Environment
M. Primary Production
N. Marine Life
O. Marine Communities
P. Marine Resources
Q. Marine Pollution
R. Global Marine Issues

Student Learning Outcomes (SLO)

CSLO (Course Student Learning Outcomes)

1. Students will learn relation between plate tectonics and locations of continents and oceans.
2. Students will learn about oceanic floor composition, and classification of sediments by origins and locations
3. Students will learning about the air and oceanic water circulations and their affect on climate
4. Students will understand the concept of life and life in the ocean

Course Requirements and assignment guidelines

Preparedness in the class - Questions

Students will be given questions in the class room that are related to previous lectures. Each question will have assigned points. Those points can be carried over to the midterms or final examination depending on their timing.

Extra Credits

- Extra credit for this course includes viewing of video tapes and CD-ROMs or internet research on subjects related to Oceanography and preparation of a report that includes introduction, body of information, and conclusions.
- Going to a museum or aquarium and writing a paper about subjects related to oceanography.
- Exams: Midterm and Final

Grading

Assignment Category	# of Assign.	Points Per Assignment	Total Points	% of Total Grade
Extra Credits	**1**	**100**	**100**	**10%**
1st Midterm	**1**	**100**	**100**	**15%**
2nd Midterm	**1**	**100**	**100**	**15%**
Final	**1**	**100**	**100**	**60%**
Grand Total	**34**	**-**	**1000**	**100%**
90-100 = **A**	80 - 89= **B**	70 - 79 = **C**	60 - 69 = **D**	59 and below = **F**

Class Policies

Attendance

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.

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.**

Walking In and Out of Class

When you arrive to class, make sure you have used the restroom, had a chance to eat, check your messages, etc. Walking in and out is rude and disruptive. If you need to leave early, or have some other problem, you need to notify the instructor in advance. **Any student who makes a habit of walking in and out of class may be asked to leave. Food is not allowed in the class room.**

Preparedness

You are expected to arrive on time. You will come to each class session prepared. You will have your books, notebook, pens/pencils, any work that is due, and you will be prepared to discuss all readings/assignments.

Cell Phones, iPods, etc.

Turn them off and put them away when class begins! They are very disruptive! If you are expecting a 'very important, i. e. more important than being in the class, phone call', then by all means stay home and wait for it. **You will be asked to leave if this occurs.**

Respect in the Class Room

Civil dialogues are essential to the class. You may not agree with the views and opinions expressed by your peers, but you don't have the right to be disrespectful. Personal attacks, profanity, vulgarity and comments that are not productive additions to the conversation will not be allowed.

Contacting Me

E-mail is the best and quickest way to contact me. **If you have a problem, contact me.** Students are expected to ask questions and obtain help from instructor via email and/or during office hours.

My Email Address: hamids@wlac.edu

College Policies:

Academic Integrity

In accordance with code 9803.28, **academic dishonesty is prohibited and will not be tolerated in this class.** Violations of academic integrity include, but are not limited to, the following actions: cheating on an exam, plagiarism, working together on an assignment, paper or project when the instructor has specifically stated students should not do so, submitting the same term paper to more than one instructor, or allowing another individual to assume one's identity for the purpose of enhancing one's grade. Academic dishonesty of any type, such as cheating or knowingly furnishing false information, by a student provides grounds for disciplinary action by the instructor or college. In written work, no material may be copied from another without proper quotation marks, footnotes, or appropriate documentation.

- **Plagiarism will result in a zero for the assignment, possible dismissal from the class and disciplinary action from the college. You will not receive credit for any work missing previous drafts, citations and/or a Works Cited page.**

Student Conduct

According to code 9803.15, disruption of classes or college activities is prohibited and will not be tolerated. Refer to the catalog and the Standards of Student Conduct in the Schedule of Classes for more information.

Recording Devices

State law in California prohibits the use of any electronic listening or recording device in a classroom without prior consent of the instructor and college administration. Any student who needs to use electronic aids must secure the consent of the instructor. If the instructor agrees to the request, a notice of consent must be forwarded to the Vice President of Academic Affairs for approval (WLAC College Catalog).

Campus Resources

As stated earlier in this syllabus, **if you are having problems** come and talk with me and check out some of the campus resources available to you.

Office of Disabled Student Programs and Services (DSP&S)

Student Services Building (SSB) 320| (310) 287-4450.
West Los Angeles College recognizes and welcomes its responsibility to provide an equal educational opportunity to all disabled individuals. The Office of Disabled Students Programs and Services (DSP&S) has been established to provide support services for all verified disabled students pursuing a

college education. DSP&S students may qualify for: priority registration, registration assistance, special parking permits, sign language interpreters and assistive technology (WLAC College Catalog).

Instructional Support (Tutoring) & Learning Skills Center

Heldman Learning Resources Center (HLRC) | (310) 287-4486
Improve your reading, language, vocabulary, spelling, math fundamentals and chemistry knowledge with convenient, self-paced computer-aided courses in the Learning Skills Center. Increase your knowledge and learning success: sign up for tutoring in various college subjects (WLAC College Catalog).

Library Services

Heldman Learning Resources Center (HLRC) | (310) 287-4269 & (310) 287-4486
The WLAC Library provides instruction on how to use the online catalog, periodical and research databases. In addition to a large collection of books, periodicals and videos the WLAC Library has course textbooks which students may use while in the Library. Web access is available in LIRL as well as meeting rooms. The upper floors provide a beautiful view ideal for study (WLAC College Catalog).

OCEANOGRAPHY 001 Class Schedule – Spring 2014 9:35 a.m. – 12:50 p.m.

NOTE: This syllabus and class schedule is subject to change if circumstances warrant it (e.g. student performance, etc.). Expect revisions and divergences.

Week	Date	Course topics	Assignment (Due Next Class Meeting)
1	Saturday 2/22	• Welcome & introduction • Review syllabus and course policies • Introduction to earth science and oceanography. • Introduction to atmosphere, hydrosphere, biosphere, and geosphere. • Earth internal and external forces • Earth internal structure. • Oceanic floor. • Sediments in the oceanic floor • Atmosphere and oceanic circulations. • Waves, tides, and coastal area characteristics. • Life in the ocean • Pelagic, and benthic communities. • Uses and abuses of the ocean • Comprehension of geological time.	• Purchase books and materials • Read Chapters 1 and 2

Week	Date	Course topics	Assignment (Due Next Class Meeting)
2	Saturday 3/1	**Chapter 1 - 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. **Chapter 2- History of oceanography** • Understanding the marine science history. • Advanced oceanic studies. Use of modern technology in oceanography.	• Quiz on the syllabus • Read: Chapter 3
3	Saturday 3/8	**Chapter 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.	• Read: Chapters 4
4	Saturday 3/15	**Chapter 4 - Ocean Basins:** • Mapping oceanic floor. • Oceanic-floor topography. • Continental margins and their elements Continental shelves, slopes and rises. • Submarine canyons, mid-oceanic ridges • Deep ocean basins and abyssal plain. • Guyotes, Seamounts. • Oceanic trenches. •	• Read: Chapter 5 and 6

Week	Date	In Class Topics	Assignment (Due Next Class Meeting)
5	Saturday 3/22	**Chapter 5 - Sediments:** • Sediments origins and 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. **Chapter 6 - 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.	• Read: All previous chapters in preparation for the first midterm
6	Saturday 3/29	• **Review of previous material** • **First Midterm**	• Read; Chapter 7 and 8
7	Saturday 4/5	**Chapter 7 - Atmospheric Circulation**: • Atmosphere and ocean interaction. • Weather and climate. • Atmospheric composition. • Effect of solar heating. • Atmospheric movements. • Coriolis Effect. • Monsoons, storms, and hurricanes. **Chapter 8 - 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.	• Read: Chapter 9

Week	Date	In Class Topics	Assignment (Due Next Class Meeting)
8	**Saturday 4/12**	• **Spring Break – College is closed**	• **Read: Chapter 10**
9	Saturday 4/19	**Chapter 9 - 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. **Chapter 10 - 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.	• Read Chapter 11
10	Saturday 4/26	**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.	• Read all previous Chapters in preparation for Second Midterm
11	**Saturday 5/3**	• **Review of previous material** • **2nd Midterm**	• **Read Chapter 12**

Week	Date	In Class Topics	Assignment (Due Next Class Meeting)
12	Saturday 5/10	**Chapter 12 - Life in the Ocean:** • Unity and diversity. • Photosynthesis and Chemosynthesis. • Primary productivity, autotrophs and heterotrophs • 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.	• Read Chapter13
13	Saturday 5/17	**Chapter 13 - Pelagic Communities:** • Location of Pelagic communities. • Planktons and Phytoplankton. • Diatoms, and Dinoflagellates. • Nekton communities: Shrimps, sharks, fishes, and marine mammals.	• Read Chapter 14 • Study for the Final Exam
14	Saturday 5/24	**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 carol reef communities. • Population of deep-sea floor and vent communities. • Communities around whale falls.	• Read Chapter 15 • Study for the Final Exam

Week	Date	In Class Topics	Assignment (Due Next Class Meeting)
15	Saturday 5/31	**Chapter 15- Uses and Abuses of the ocean:** • Marine resources: Sands, 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.**	• Prepare for Final Examination
16	Saturday 6/7	**Final Examination** ***NOTE: The date and time for the Final Exam could change. You will be notified well in advance if this is the case.***	

Student Acknowledgment

(Please return this sheet to the instructor)

"I _____, have completely read this syllabus and understand and agree to the course requirements."

Please indicate below, any special needs or circumstances that may have some impact on your work in this class, and for which you may require special accommodations, including but not limited to physical or mental disabilities, inability to arrive in class on time or need to leave class early, observance of religious holidays, ect.

Special needs or circumstances: