**Oceanography 2 and 2L Introductory Oceanography**

**Monterey Peninsula College Fall 2012**

Instructor: Alfred (Fred) Hochstaedter

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Text: *Essentials of Oceanography* by Thurman and Trujillo

Lab notes to be handed out in class

Class Times: MW10-12 and F 11-12 or MW 3-5:30

Office Hours: Drop in; I’m here most of the time, or MW 9-10, F 10-11

Transfers: UC and CSU as a Physical Science Lab class

Web site: <http://www.mpcfaculty.net/alfred_hochstaedter/Oceanography.htm>

To find it most easily, Google on “MPC Oceanography”

**Goals**

This class introduces the subject of Oceanography. It will emphasize the geologic and physical processes that operate in the ocean setting and begin to explain how they influence marine ecosystems. The class will teach global themes using local examples. This is a rigorous class designed to transfer to other universities. It is appropriate for those seeking to satisfy their general education physical science requirements as well as those taking more advanced classes in the Earth or Marine Sciences.

**Oceanography Student Learning Outcomes**

These are broad, over-arching statements that describe what you as the student is expected to be able to do upon exiting the class.

* Recognize major seafloor features based on their shape and interpret their origin using plate tectonic theory.
* Analyze how oceanic processes contribute to the Earth’s systems from geological, chemical, biological, and physical perspectives.
* Use the scientific method to explain the phenomena we observe in the natural world.

**Labs and Field Trips**

Labs and field trips are where the real learning in this class takes place. Science is something one *does*, not a collection of facts that one memorizes. Non-participation in labs and/or field trips can cause failure in the class. The field trips are required to bring the total lab time up to the state regulated three hours per week so that this class can transfer to UC and CSU as a laboratory physical science class. Please note the field trip schedule and arrange your personal and work schedule now. On tests, you may encounter all topics discussed during lecture, labs and field trips.

**Can’t go on a field trip?** If you establish a reasonable excuse *in advance* of the scheduled land-based weekend field trip, I will be amenable and assign the following make-up assignment: follow the field trip guide (to be handed out), and describe, in writing, what you see at each stop. Take photographs of your smiling face at each field-trip stop standing in front of the rocks, beach, overlook, or other subject of interest. Turn in your photographs with written descriptions as captions by an agreed upon deadline.

This makeup option is a poor substitute for participating in the actual field trip with the instructor. You will still be responsible on tests for all material covered or discussed during the regular class field trip. If you do not turn in this make-up assignment by an agreed upon deadline, you will fail the class.

**Tests**

Tests will be a combination of multiple choice and short answer questions with material taken from lecture, lab, and field trips. Students often say the tests are challenging, yet fair. I expect you to learn the material well enough so that you can apply it to new situations during tests. To promote your efforts to learn and be able to use the material rather than just memorize it, I allow notes on one side of one 8.5X11 inch piece of paper during all exams.

Please **contact me** if you need to miss an exam. If you do contact me, we can schedule a makeup. If you do not contact me, and just fail to show up for the test, I’ll give you a makeup the next time I see you or at a time at my discretion. Calling or e-mailing an instructor *before* you miss a class is a courteous effort you should practice in all of your classes.

**Classroom Rules and Expectations**

This classroom operates on a system of mutual respect. You receive respect from me by my offering an organized, stimulating, and challenging course; one in which I hope all of you heighten your appreciation of how the Earth/Ocean system works.

I expect you to show me and your fellow students respect in the following ways:

-Arrive to class on time; entering the classroom late and finding a seat is disruptive and disrespectful.

-Don’t talk during lecture unless contributing to the discussion; it distracts me and others, and detracts from the quality of the presentation.

-No food or drinks in lab when we work with maps; one spill could ruin a map.

-No talking, whispering, or distracting noises during lecture.

-Call the instructor ahead of time if you can’t make a field trip, test day, or deadline; it’s just common courtesy.

-Don’t cheat or plagiarize on exams or assignments. Punishment for cheating or plagiarism may include one or all of the following: a zero on the pertinent test or assignment, failing the class, a letter and/or meeting with the Dean of Student Services.

- Plagiarism is the un-credited use of another person’s writing, images, or ideas. It’s like stealing an idea. Plagiarism is copying material from books or web sites, inserting it into your work and calling it your own. You wouldn’t want somebody else taking one of your good ideas and using it as their own, would you?

-Plagiarism and cheating are dealt with in accordance with MPC’s policies on student’s rights and responsibilities:

<http://www.mpc.edu/studentservices/Pages/StudentRightsandResponsibilities.aspx>

**Attendance**

Attendance is required. Three consecutive unexcused absences is cause for dropping the student from the class. Absences are excused by contacting the instructor *before* the class when the absence will take place. Contact may be made by phone, e-mail (best), or in person. Attendance is taken at the beginning of class. It is the right, but not the responsibility, of the instructor to drop students after three unexcused absences. If you decide to drop the class, please go to the student services office and drop the class. DO NOT assume the instructor will do it for you. Drop the class yourself to avoid getting an F in the class.

**Schedule (subject to change)**

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| **Wk** | **Dates** | **Lecture Topic,**  **Reading assignment** | **Lab topic** | | **Tests** |
| 1 | Aug 27-31 | Introduction  Intro, Ch 1, Appendix III | Nautical charts and navigation | |  |
| 2 | Sept 5-7 Mon Holiday | Plate Tectonics  Ch 2 | Bathymetric charts navigation | |  |
| 3 | Sept 10-14 | Plate Margins  Ch 2 | Plate tectonics and bathymetry of the sea floor | |  |
| 4 | Sept 17-21 | Features of the Seafloor  Ch 3 | Finish Tectonic Lab | | Wed Sept 19  Test 1  150 pts |
| 5 | Sept 24-28 | Marine sediments  Ch 4 | Rocks and sediments of the ocean floor | |  |
| **Saturday Sept 29, Tour of the Central CA Coast (by Bus) 8:00 am – 4 pm** | | | | | |
| 6 | Oct 1-5 | Marine sediments  Ch 4 | Beach profiles | |  |
| 7 | Oct 8-12 | Coasts  Ch 10, 11 | CoastalErosion.pdf | |  |
| 8 | Oct 15-19 | Properties of Seawater  Ch 5 | Water density | |  |
| **Saturday October 20: Monterey Bay Cruise: 7:00 am -12 noon** | | | | | |
| 9 | Oct 22-26 | Atmosphere-Ocean  Connection  Ch 6 | Global Ocean Water Masses | | Wed Oct 24 Test 2  150 pts |
| 10 | Oct 29-Nov 2 | Ocean Circulation I  Ch 7 | Atmospheric Circulation | |  |
| 11 | Nov 5-9 | Ocean Circulation II  Ch 7 | Ocean Circulation | |  |
| 12 | Nov 12-16 | Fisheries and Conservation  Ch 13 | Monterey Bay Aquarium  Field Trip  Wed Nov 14 | |  |
| 13 | Nov 19-21 Fri Holiday | Catchup | Marine Protected Areas | |  |
| 14 | Nov 26-30 | Waves and tides  Ch 8, 9 |  | | Wed Nov 28  Test 3  150 pts |
| 15 | Dec 3-7 | Waves and tides  Ch 8, 9 | Drifter in a tsunami | |  |
| 16 | Dec 10-14 | Catch-up and Review | Project presentation | | Project Presentations  125 pts |
| Final Exam\* Mon Dec 17 10:30 am OR Wed Dec 19 3:30 pm | | | | 175 pts | |

\*The final is cumulative; it covers all the material in the class.

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| **Grading**  Labs: 250 points  Test 1: 150 points  Test 2: 150 points  Test 3: 150 points  Final: 175 points  Project: 125 points  Total: 1000 points | A = 850-1000 points  B = 700-849 points  Class average is usually in the B range  C= 600 -699 points  D = 550-599 points  F < 550 points  The final is cumulative; it covers the entire course: lab and lecture. |

**Things you must do to pass the class**.

1) Accumulate at least 550 points.

2) Attend the Weekend field trips; you will not pass if you don’t go.

You will get the same grade in OCEN 2 and 2L

**The Project**

The project involves researching an aspect of ocean science and explaining the results to your peers in the form of an oral presentation and a poster or powerpoint. Whatever your chosen topic, you must explain how processes within at least two of the major disciplines of oceanography (marine geology processes, physical oceanography processes, or marine biology processes) influence your topic of interest. The idea is to integrate some of the major themes we’ve discussed in class. More details later.

**-Important Dates:**

September 9: Last day to drop classes and get your money back

September 21: Last day to request a Pass/No Pass grade option at the Admissions and Records office

September 21: Last day to withdraw without a “W”

November 21: Last day to withdraw and receive a “W”

**Good Luck!** I hope you enjoy your further explorations of the World Ocean and the mysteries it may reveal.