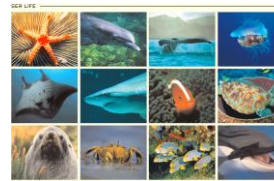
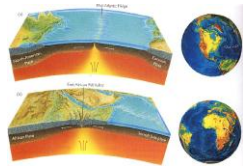


# PHYSICAL SCIENCE – OCEANOGRAPHY



Course covers the science of our oceans: the geography, geology, physics, chemistry, weather, and biology of the oceans (emphasis on the Pacific Northwest), plus an optional half-day weekend field trip to the North Oregon Coast. ☺ This one-term survey course may be part of a year's sequence in physical science for college transfer credit.

GS-108, CRN 32242 (lecture) and 32243 (lab), 4 credits. Lecture and Laboratory.

Dates: Monday and Wednesday nights, 6 pm – 8:50 pm, Summer Quarter 2012, 11 weeks (starting June 25th).

Where: PCC-Southeast Center, 2305 SE 82<sup>nd</sup> Avenue, Tabor Hall—Room 126

Textbook: Essentials of Oceanography, 10<sup>th</sup> Edition (2011), by Trujillo & Thurman (ISBN ???)

Instructor: Kyle Dittmer, (503) 731-1314 (day), email: kyle.dittmer@pcc.edu

## COURSE TOPICS:

### Introduction

- Scientific Method
- Branches of Ocean Science
- History of Oceanography
- Geography of the Earth

### Marine Geography & Geological Oceanography

- Seafloor and Coastal features
- Plate Tectonics and Volcanoes
- Hydrothermal vents – Undersea Volcanoes
- Coastal process (Film: *Beach...River of Sand*)

### Physical and Chemical Oceanography

- Seawater properties
- Ocean Currents
- Waves
- Tides
- Estuaries and Wetlands

### Weather

- Ocean-Atmosphere interactions
- El Niño and La Niña – ENSO

### Marine Biology

- Life in the sea
- Ecology of the oceans
- Marine habitats (Cousteau video)
- Fishing – harvest and conservation
- Human Impacts

### Other Topics

- Traditional and new Energy Resources
- Mineral and Oil resources
- Environmental Impacts
- Climate Change
- Coastal Dead Zones
- Student-chosen Topics ☺

It's easy to register!

To register by mail or fax, use the form provided. If you have taken a class since January 1998, you may use TRAIL automated phone registration by calling 503-977-4933. You will be asked for your social security number, PIN number (your birth date, [MMDDYY] unless you have changed it) and the CRN numbers for the classes you want to take. TRAIL hours are 7 a.m. - 11 p.m. Monday-Thursday, 7 a.m.- 6 p.m. Friday-Saturday, and 1 to 6 p.m. Sunday.

### You May Be Eligible For a Tax Credit

Based on the Taxpayer Relief Act of 1997, you may qualify for an educational tax credit. For more information, please contact a tax advisor, call the IRS at 1-800-829-1040 or visit the PCC web site at: [www.pcc.edu/enrolling/tax.htm](http://www.pcc.edu/enrolling/tax.htm)

Portland Community College is an Affirmative Action, Equal Employment Opportunity Institution.

If you have a disability that requires any special materials, services, or assistance, please contact the Office for Students with Disabilities, 503-977-4341, TTY 503-977-4877, at least 72 hours prior to the first class so we may arrange appropriate accommodations. For general information via TTY, call 503-977-4877.

