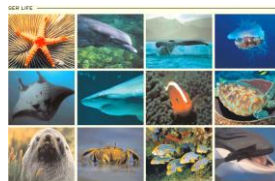
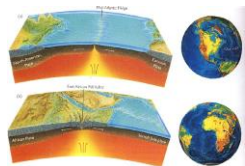


PHYSICAL SCIENCE – OCEANOGRAPHY



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

GS-108, CRN #32931, 4 credits. Lecture and Laboratory format, plus one field trip.

Dates: Monday and Wednesday evenings, 6 pm – 8:50 pm, **Summer Quarter 2019**, 10 weeks (starting June 24th).

Where: PCC-Southeast Campus, SE 82nd Avenue and Division, Student Commons Building — SCOM 308

Textbook: **Essentials of Oceanography**, 12th edition (2016), by Trujillo & Thurman (ISBN-13: 978-0134073545)

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

COURSE TOPICS:

Introduction

- Scientific Method
- Branches of Ocean Science
- History of Oceanography
- Land/Sea Geography (film: *Oregon...A New View*)

Marine Geography & Geological Oceanography

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

Physical and Chemical Oceanography

- Seawater properties
- Ocean currents
- Waves
- Tides
- Earthquakes/Tsunamis (film: *Cascadia*)
- Estuaries and Wetlands

Weather

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

Marine Biology

- Life in the sea (film...*Blue Planet – Seasonal Seas*)
- Ecology of the oceans
- Marine habitats (Cousteau film...*Voyage to Kure*)
- Fishing – harvest and conservation
- Human impacts on sea-life

Other Topics

- Traditional and new Energy Resources
- Mineral and Oil resources
- Environmental Impacts
- Sea-Level Rise (film...*Sun Come Up*)
- Climate Change
- Coastal Dead Zones
- Student-chosen Oceanography topics ☺

It's easy to register! To register online, go to: <<http://www.pcc.edu/enroll/registration/non-credit-registration.html>>. If you have taken a class since January 1998, you may use <my.pcc.edu>. You can also register by calling 971-722-8888. You will need to know the 5-digit CRN for the class you want to take.

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

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.

