

Geography 410/510: Field Physical Geography

Summer 2015

CRN# 40952/40957

This field course will take you through the three major eco-zones of Oregon. We will look at the forces that shaped the land, components that create the natural resources, and the changing way sustainability is achieved. This course will look at water quality, tectonics, native plants, macro-invertebrates, and forest practices. Students can expect to explore different areas, collect samples, assess data they collect, and spend most of the day outside regardless of the weather. As part of this course we will be spending one night in the dorms at HJ Andrews Experimental Forest (No additional Fee).

Course Objectives:

- Identify the physical processes that shape the patterns of Earth's surface. Explore the characteristics and spatial distribution of ecosystems and biomes on Earth's surface in Oregon.
- Quantify the changes that occur in the meaning, use, distribution, and importance of resources and organisms.
- Identify how human actions modify the physical environment and their impact.
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Instructor: Brian Vollmer-Buhl bvollmer@uoregon.edu

Class Meets: Friday 8:00 a.m. to 4:50 p.m.

June 26 – Native Trees, Mineral Resources, Headwaters of the Siuslaw River, and Intro to Invasive Species.

July 3- Macro-Invertebrates, Formation of Coast Range, Siuslaw River to Estuary, and Hecata Head.

July 10-11 Salmon Habitat, Small woodlot Forestry, Volcanology, Flood Control, Fire Ecology, and Desert Ecology.

Classroom: Condon Hall Rm. 106

Office Hours: Wednesday 12:00 to 3:00 Computer Lab in Condon Hall

Optional Text: FUNDAMENTALS OF PHYSICAL GEOGRAPHY (*2nd Edition*)

Available online at: www.physicalgeography.net/fundamentals/contents.html

Additional Readings: Each week there will be items on Blackboard for resources, readings, and videos related to that weeks class. The pre-trip quizzes will be on this information.

Suggested Supplies: This is a suggested list of supplies a student will want to be prepared and comfortable during this class.

- Water Bottle
- Rain Coat
- Backpack
- Clipboard
- Notebook
- Pencil/Pen
- Food

Optional Supplies: Please bring these items if you have them. Loaners will be available.

- GPS
- Rubber Boots
- Sleeping bag

Required App: Socrative Student. This app. can be found at: www.socrative.com/apps.php
Please download this free app. on your phone. If you don't have a smart phone or cannot download this, you can access the app on a computer at this site.

Evaluation:

- Exercises 30% (10% for each)
- Participation 40% (10% for each field day)
- Quizzes 10%
- Final 20 %

Exercises: Students will select **three** of the following assignments to be completed by July 19th. Full details of each assignment will be posted on Blackboard.

1. Barriers to Salmon Migration. Amazon Creek in Eugene, Oregon once had salmon. Students will use <http://nationalmap.gov/> to trace the waterway all the way to the ocean and create a one to two page narrative of the challenges and barriers to salmonid fish passage.
2. Book Review. Students will select a book which explores the use or exploitation of a natural resource. In a two page paper students will summarize the book and discuss the connection to the Pacific Northwest, Oregon, Eugene or students home-area.
3. Using a data collection technique from the field class collect data from three sites and compare them. Submit a one to two page report.
4. Create a photo documentary with examples of six to ten Oregon Forest Protection Laws. This is a PowerPoint type presentation with pictures and brief descriptions.
5. Conduct a circle plot and compare two stands of timber quantitatively and qualitatively. Submit a one to two page report.

6. Compare the macro-invertebrates of two bodies of water and use species density to assess for water quality. Submit a one to two page report.
7. Create a geocaching course that highlights three invasive species of the Willamette Valley. Submit a two page document with coordinates and background information.
8. Review **Forest Fact Book** by The Oregon Forest Resource Institute. Assess for accuracy, bias, and usefulness in classroom. 1-2 page report.
9. Film review. Pick a documentary on a natural resource related to this class. A good place for free film is topdocumentaryfilms.com. In a two page paper students will summarize the film and discuss the connection to the Pacific Northwest, Oregon, Eugene or students home-area.
10. Compare the physical characteristics of three sites using a protocol from <http://ecoplexity.org/views/protocols>. Submit a 2 page report summarizing sites, data, and findings.
11. Student designs their own assignment and sends the instructor a proposal. Once the assignment is approved the student may start. Proposals must be submitted by July 12th so the student has adequate time to complete them by July 19th.

Graduate Students: On Monday each week, graduate students will pick from a list of topics related to that week's class. Graduate students will select one topic from Blackboard and prepare to share that information in a 5 minute mini-lesson at some point during that week's field class.

Quizzes: Students will be taking a pre and post field trip quiz each day using the app. Socrative. These are graded based on completion.

Final: This is an activity based final. Students will create a two stop (More is O.K.) geocaching course for the instructor. The idea is that the student creates a geocaching course with coordinates and task/information sheets for each cache. The caches have to be located within 5 miles of Condon Hall. The caches have to be related to a topic/skill/principle covered during the field classes. Details will be posted on Blackboard.