Clackamas Community College

Online Course/Outline Submission System

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Section #1 General Course Information

Department: Sciences

Submitter

First Name: Sarah Last Name: Hoover Phone: 3354 Email: sarahh

Course Prefix and Number: G - 145

Credits: 4

Contact hours

Lecture (# of hours): 33 Lec/lab (# of hours): Lab (# of hours): 33 Total course hours: 66

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Geology of the Pacific Northwest

Course Description:

An introductory lab course that explores the geology and historic development of Northwest with an emphasis on Oregon geology. Each of the geologic regions is examined by using basic geologic principles, rock types, hazards and the Northwest's tectonic history.

Type of Course: Lower Division Collegiate

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?
Yes
Check which General Education requirement:
✓ Science & Computer Science
Is this course part of an AAS or related certificate of completion?
No
Are there prerequisites to this course?
No
Are there corequisites to this course?
No
Are there any requirements or recommendations for students taken this course?
Yes
Recommendations: None
Requirements: Two Saturday field trips
Are there similar courses existing in other programs or disciplines at CCC?
No
Will this class use library resources?
Yes
Have you talked with a librarian regarding that impact?
No
Is there any other potential impact on another department?
No
Does this course belong on the Related Instruction list?
No
GRADING METHOD:
A-F or Pass/No Pass
Audit: Yes

When do you plan to offer this course?

✓ Summer

✓ Not every year

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

No

Will this course appear in the college catalog?

Yes

Will this course appear in the schedule?

Yes

Student Learning Outcomes:

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

- 1. analyze the scientific development of fundamental theories and concepts of geology such as the theory of plate tectonics, the geological structure of the Earth and the rock cycle; (SC1)(SC3)
- 2. apply the geological time table and geological maps to understand the development of a region, (SC1) (SC2)
- 3. gather historical data and predict the plate tectonic history of a region based on the rocks found in a region, (SC2)
- 4. use maps, field observations and tectonic data to predict geological hazards associated with different provinces in the Northwest United States; (SC2) (SC3)
- 5. locate and identify the 9 physiographic regions of Oregon and describe the general geological history of each region, (SC1)
- 6. gather data on fossils found in the NW and describe past geologic environments of these regions based on these data, (SC2)
- 7. distinguish between igneous, sedimentary and metamorphic rocks based on their appearance and formation and discuss where in the NW each type dominates. (SC2)

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COURSE OUTLINE MAPPING CHART

Mark outcomes addressed by the course:

- Mark "C" if this course completely addresses the outcome. Students who successfully complete this course are likely to have attained this learning outcome.
- Mark "S" if this course substantially addresses the outcome. More than one course is required for the outcome
 to be completely addressed. Students who successfully complete all of the required courses are likely to have
 attained this learning outcome.
- Mark "P" if this course partially addresses the outcome. Students will have been exposed to the outcome as
 part of the class, but the class is not a primary means for attaining the outcome and assessment for general
 education purposes may not be necessary.

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

- 1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.
- 2. Locate, evaluate, and ethically utilize information to communicate effectively.
- 3. Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

- 1. Engage in ethical communication processes that accomplish goals.
- 2. Respond to the needs of diverse audiences and contexts.
- Build and manage relationships.

MA: Mathematics Outcomes:

- 1. Use appropriate mathematics to solve problems.
- 2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

AL: Arts and Letters Outcomes

- 1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.
- 2. Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

- 1. Apply analytical skills to social phenomena in order to understand human behavior.
- 2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SC: Science or Computer Science Outcomes

- **s** 1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.
- **s** 2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

S

3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

CL: Cultural Literacy Outcome

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Outcomes Assessment Strategies:

✓ General Examination

- ✓ Writing Assignments
- ✓ Multiple Choice Test

✓ Journal Writing

✓ Other Assessment Tools: Laboratory activities

Major Topic Outline:

- 1. Introduction.
- a. Basic Geologic Principles and Geologic Time.
- b. Geologic Provinces.
- c. Plate Tectonic Theory.
- 2. Eastern Blue Mountains.
- a. Pre-Tertiary Exotic Accretions.
- 3. Western Blue Mountains.
- a. Snake River Plains.
- 4. Basin and Range.
- 5. High Lava Plains.
- 6. Columbia River Basalts (Deschutes-Umatilla Plateau).
- 7. Cascades.
- 8. Geology of the Willamette Valley.
- 9. Coast Range.

Lab Topic Outline

- 1. Mineral Properties and mineral ID.
- 2. Metamorphic rocks and environments.
- 3. Igneous textures and rocks
- 4. Sedimentary rocks and environments. a. The Coastal Plain and the Willamette Valley.
- 5. Maps.
- 6-10. Two Saturday field trips: 9 hours each.
- a. The Oregon Coast and the Coast Range.
- b. The Cascades and the Columbia River Gorge.

Does the content of this class relate to job skills in any of the following areas:

Increased energy efficiency
 Produce renewable energy
 Prevent environmental degradation
 Clean up natural environment
 Supports green services

Percent of course: 0%

Section #2 Course Transferability

Concern over students taking many courses that do not have a high transfer value has led to increasing attention to the transferability of LDC courses. The state currently requires us to certify that at least one OUS school will accept a new LDC course in transfer. Faculty should communicate with colleagues at one or more OUS schools to ascertain how the course will transfer by answering these questions.

- 1. Is there an equivalent lower division course at the University?
- 2. Will a department accept the course for its major or minor requirements?
- 3. Will the course be accepted as part of the University's distribution requirements?

If a course transfers as an elective only, it may still be accepted or approved as an LDC course, depending on the nature of the course, though it will likely not be eligible for Gen Ed status.

Which OUS schools will the course transfer to? (Check all that apply)

✓ OSU (Oregon State University)
✓ OSU-Cascade

Identify comparable course(s) at OUS school(s)

OSU: GEO LDT UO: G120T

How does it transfer? (Check all that apply)

✓ general elective
:

Provide evidence of transferability: (minimum one, more preferred)

✓ Other. Please explain.

Verified transferability via course transfer web page for universities

First term to be offered:

Next available term after approval