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Viewing: **G 208 : Volcanoes and Their Activity**

Last approved: 03/19/15 12:56 pm

Last edit: 02/06/19 12:57 pm

Changes proposed by: [eriks.puris](#)

Catalog Pages [General Education/Discipline Studies](#)  
referencing this course [Geology](#)

#### General Information

#### In Workflow

1. [G SAC Chair](#)
2. [G SAC Administrative Liaison](#)
3. [Curriculum Office-Curriculum](#)
4. [Curriculum Committee Chair](#)
5. [Dean of Instruction - Cascade](#)
6. Dean of Academic Affairs
7. VP Academic Affairs
8. Ready for Banner
9. Banner

#### Approval Path

1. 01/18/19 12:56 pm  
[eriks.puris](#):  
Recommended for G SAC Chair
2. 01/18/19 1:10 pm  
[alyson.lighthart](#):  
Recommended for G SAC Administrative Liaison
3. 01/27/19 3:01 pm  
[sally.earll](#):  
Recommended for Curriculum Office-Curriculum
4. 02/19/19 6:17 am  
[ann.cary](#): Recommended for Curriculum Committee Chair

#### History

1. Aug 12, 2014 by [jmorfin](#)
2. Mar 19, 2015 by [stimmins](#)

Submitter:	<u>User ID:</u> <a href="#">eriks.puris</a> <a href="#">stimmins</a>	<u>Phone:</u> <a href="#">x7627</a> <del><a href="#">7813</a></del>
Course Prefix	Geology (G)	
Course Number	208	
Course Type	Lower Division Collegiate	
Implementation Term	<a href="#">Fall 2019</a> <del><a href="#">201502</a></del>	
Course Title	Volcanoes and Their Activity	
Transcript Title	Volcanoes and Their Activity	

	<b>Lecture:</b> Meets <b>3</b> hours per week for <b>10</b> weeks. <b>Total</b> student academic engagement hours per quarter: <b>90</b>
Contact Hours per Quarter	<b>Lec/Lab:</b> Meets <b>0</b> hours per week for <b>10</b> weeks. <b>Total</b> student academic engagement hours per quarter: <b>0</b>
	<b>Lab:</b> Meets <b>0</b> hours per week for <b>10</b> weeks. <b>Total</b> student academic engagement hours per quarter: <b>0</b>
	<b>Total</b> student academic engagement hours for course: <b>90</b>
Credits	3
Please indicate the basis for creating this experimental course:	
Justification for change:	Updating MTH, reading and writing prerequisites.
Does this course require a special additional fee set up through the bursar's office?	No
Special Fee	
Course Is Repeatable	No
If this course is equivalent to other currently active course(s), please indicate	
If this course is mutually exclusive with other currently active course(s), please indicate	
If the SAC intends to allow this course to be co-scheduled with other currently active course(s), please indicate	
Grading Option(s)	Audit Letter Grade Pass/No Pass
Default Grading Option	Letter Grade
Course Description	Covers the origin, activity, products, <b>classification</b> , <del>classification</del> and hazards of volcanoes. Audit available.
Prerequisites	<b>(WR <del>WR-115</del>, RD-115 and RD 115)</b> <b>MTH-65</b> or <b>IRW 115 and (MTH 58 or MTH 65)</b> or equivalent <b>placement. placement-test scores.</b>
Pre/Concurrent Courses	
Corequisites	
General Education/Discipline Studies Designation	
General Education Areas Satisfied	Mathematics, Science, Computer Science
Standard Prerequisites	

Does this course need  
to opt-out of the  
standard  
prerequisites? No

#### Cultural Literacy Designation

Does this course satisfy  
the Cultural Literacy  
Designation Criteria No

#### Course Content and Outcome Guide (COG)

**Addendum to Course Description** Volcanoes and Their Activity (G208) is a one-term introductory course in volcanology, which is a branch of the science of geology. The student will develop an understanding of the types, origin, activity, products, and hazards of volcanoes. This course can be used to partly fulfill graduation requirements for the Associate Degree, and has been approved for block transfer. The text and materials have been chosen by the faculty and the emphasis of the course will be the viewpoint of the author(s). This includes the geologic time scale and the evolution of the Earth.

Regarding the teaching of basic geologic principles (such as geologic time and the theory of evolution), the Portland Community College Geology Department stands by the following statements about what is science.

1. Science is a fundamentally non-dogmatic and self-correcting investigatory process. A scientific theory is neither a guess, dogma, nor myth. The theories developed through scientific investigation are not decided in advance, but can be and often are modified and revised through observation and experimentation.
2. "Creation science," also known as scientific creationism, is not considered a legitimate science, but a form of religious advocacy. This position is established by legal precedence (Webster v. New Lenox School District #122, 917 F.2d 1004).

**Outcomes** **Upon completion of the** ~~A student who successfully completes this~~ course **students** should be able to:

1. Use an understanding of rock and mineral characterization and classification to infer the igneous processes which formed individual rock and mineral specimens.
2. Analyze the development, scope, and limitations of plate **tectonics**, ~~tectonics~~ and utilize plate tectonics to explain the Earth's volcanic activity, and the relationship of this activity to climate change, agriculture, and formation of economic deposits.
3. Access volcano science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of volcanic **processes**, ~~processes~~ identifying areas of congruence and discrepancy.
4. Make field and **laboratory-based** ~~laboratory-based~~ observations and measurements of volcanic rocks and minerals and/or volcanic landforms, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of volcanic processes identifying areas of congruence and discrepancy.
5. Use scientifically valid modes of inquiry, individually and collaboratively, to critically evaluate the hazards and risks posed by volcanoes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these risks, and effectively communicate the results of this analysis to their peers.

#### Aspirational Goals

**Course Activities and Design** The material in this course will be presented in a lecture/discussion format Other educationally sound methods may be employed such as guest lectures, field trips, research papers, and small group work.

**Outcomes  
Assessment  
Strategies**

At the beginning of the course, the instructor will detail the methods used to evaluate student progress and the criteria for assigning a course grade. The methods may include one or more of the following tools: examinations, quizzes, homework assignments, research papers, small group problem solving of questions arising from application of course concepts and concerns to actual experience, oral presentations, or maintenance of a personal work journal.

**Course  
Content:  
Themes,  
Concepts,  
Issues and  
Skills**

1. Describe the relationship of volcanoes to plate boundaries
2. Classify the types of rocks created by volcanic processes
3. Contrast pyroclastic and effusive eruption styles
4. Examine the effect of silica content on eruption style
5. Discuss a number of historical volcanic eruptions and determine the major cause of human destruction for each case
6. Explore the methods used to forecast volcanic eruptions
7. Classify the features that occur in volcanic landscapes
8. Define the different kinds of plutons
9. Discuss the hazards associated with the Cascade volcanoes
10. Define the following terms: shield volcano, composite volcano, cinder cone, lahar, pyroclastic flow, pahoehoe, aa
11. Discuss the effects of volcanic eruptions on climate

Topics to be covered include:

**Course reviewer  
comments**

Key: 3997