

Course Change Request

Date Submitted: 01/17/19 5:04 pm

Viewing: **G 201 : Earth Materials and Tectonics Physical Geology**

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

Last edit: 02/02/19 7:20 am

Changes proposed by: **eriks.puris**

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

Other Courses
referencing this course This course is listed in the Catalog Description
for:
[G 203 : Evolution of Planet Earth](#)

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 12:54 pm
eriks.puris:
Recommended for G SAC Chair
2. 01/18/19 1:06 pm
alyson.lighthart:
Recommended for G SAC Administrative Liaison
3. 01/27/19 2:58 pm
sally.earll:
Recommended for Curriculum Office-Curriculum
4. 02/19/19 6:14 am
ann.cary: Recommended for Curriculum Committee Chair

History

1. Aug 12, 2014 by jmorfin
2. Mar 19, 2015 by stimmins

Submitter: User ID: **eriks.puris stimmins** Phone: **7627 7813**

Course Prefix Geology (G)

Course Number 201

Course Type Lower Division Collegiate

Implementation Term **Fall 2019 201502**

Course Title **Earth Materials and Tectonics Physical-Geology**

Transcript Title **Earth Materials and Tectonics Physical-Geology**

	Lecture: Meets 3 hours per week for 10 weeks. Total student academic engagement hours per quarter: 90
Contact Hours per Quarter	Lec/Lab: Meets 0 hours per week for 10 weeks. Total student academic engagement hours per quarter: 0
	Lab: Meets 3 hours per week for 10 weeks. Total student academic engagement hours per quarter: 30
	Total student academic engagement hours for course: 120
Credits	4
Please indicate the basis for creating this experimental course:	
Justification for change:	Revising the course because G 201 and G 202 currently have the same course title - update MTH prereqs
Does this course require a special additional fee set up through the bursar's office?	Yes
Special Fee Amount	\$12.00
Special Fee Code	T111
Special Fee	\$12.00
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	Introduces physical geology which deals with minerals, rocks, internal structure of the earth , earth and plate tectonics. Includes a weekly lab. Audit available.
Prerequisites	(WR WR-115, RD-115 and RD 115) MTH-95 or IRW 115 and (MTH 95 or MTH 98) or equivalent placement. placement-test scores.
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 (CCOG)

Addendum to Course Description Physical Geology G201 is intended for both geology majors and nonmajors, and is the first term of a year of beginning college geology. Physical Geology is concerned with earth materials and geologic processes acting on the earth. G201 deals mainly with rocks and minerals, and introduces students to internally-driven geologic processes. 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 concepts of geologic time 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 geologic processes which formed individual rock and mineral specimens.
2. Analyze the development, scope, and limitations of plate tectonics and utilize plate tectonics to explain the Earth's earthquake and volcanic activity as well as the occurrence of common rocks, minerals, and economic deposits.
3. Access earth science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of solid earth **processes**, ~~processes~~ identifying areas of congruence and discrepancy.
4. Make field and **laboratory-based** ~~laboratory-based~~ observations and measurements of rocks and minerals and/or Earth's internal process, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of solid earth 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 and earthquakes both to themselves and society as a whole, evaluate the efficacy of possible ethically robust responses to these hazards and 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 combination of lecture/discussion and laboratory exercises. 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, laboratory write ups, 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. Distinguish between rocks and minerals
2. Describe the major types of materials that make up the Earth's crust and explain how each material relates to the rock cycle
3. Describe and use the properties involved in mineral identification
4. Classify commonly occurring minerals
5. Classify commonly occurring igneous, sedimentary and metamorphic rocks
6. Develop an understanding of the origin, activity, structure, and kinds of volcanoes
7. Describe the relationship of volcanoes and earthquakes to plate tectonics
8. Understand how earthquakes are generated
9. Use three earthquake records to locate the epicenter of an earthquake
10. Describe how earthquakes can be used to study the interior of the Earth
11. Discuss the evidence supporting the theory of plate tectonics
12. Examine weathering and the formation of soils (this topic may be covered in either G201 or G202 at the discretion of the instructor)
13. Develop an understanding of the kinds and origins or geologic structures (this topic may be covered in either G201 or G202 at the

**Course reviewer
comments**

Key: 3993