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Viewing: **GS 108 : Physical Science (Oceanography)**

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

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

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

General Information

In Workflow

1. [GS SAC Chair](#)
2. [GS 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 12:47 pm
[eriks.puris](#):
Recommended for GS
SAC Chair
2. 01/18/19 1:13 pm
[alyson.lighthart](#):
Recommended for GS
SAC Administrative
Liaison
3. 01/27/19 3:10 pm
[sally.earll](#):
Recommended for
Curriculum Office-
Curriculum
4. 02/19/19 6:24 am
[ann.cary](#): Recommended
for Curriculum
Committee Chair

History

1. Aug 13, 2014 by [jmorfin](#)
2. Mar 19, 2015 by
[stimmins](#)

Submitter: User ID: [eriks.puris](#) [stimmins](#) Phone: [x7627 7813](#)

Course Prefix General Science (GS)

Course Number 108

Course Type Lower Division Collegiate

Implementation Term [Fall 2019](#) ~~201502~~

Course Title Physical Science (Oceanography)

Transcript Title Phys Science (Oceanography)

	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:	Updating math, reading, and writing prerequisites.
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	Explores Includes the chemical, biological, physical , physical and geological nature of the oceans. Includes a weekly lab. Audit available.
Prerequisites	(WR WR-115, RD-115 and RD 115) (WR WR-115, RD-115 and RD 115) MTH-65 MTH-65 or IRW 115 and (MTH 58 or MTH 65) 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 The purpose of this course is to develop an understanding of the chemical, biological, physical, and geological processes related to the ocean, and include historical perspectives. It is a one-term survey course that may be included as part of the year's sequence in physical science for college transfer credit. The course will have as many of the following components as feasible: lectures, discussions, lab activities, videos, CDs, slides, and computer aided instruction. It is necessary to successfully complete the lab part of the course in order to pass the course.

The faculty has chosen the text and lab materials and the viewpoints shall be that of the author(s). This includes the topics of relativity, the geologic time scale, and the evolution of the Earth, solar system, and the galaxy and universe.

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.

- 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

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

1. Use an understanding of waves, tides, and coastal processes to explain the development and functioning of beaches, **shorelines**, ~~shorelines~~ and estuaries.
2. Use an understanding of ocean structure and processes to explain the spatial and temporal distribution of biological productivity in the world ocean.
3. Access ocean science information from a variety of sources, evaluate the quality of this information, and compare this information with current models of ocean **processes**, ~~processes~~ identifying areas of congruence and discrepancy.
4. Make field and **laboratory-based** ~~laboratory-based~~ observations and measurements of ocean materials and marine processes, use scientific reasoning to interpret these observations and measurements, and compare the results with current models of ocean 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 ocean processes 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 laboratory is not separate from the lecture, but will usually be correlated in such a way as to reinforce the materials being discussed in the lecture section. It is necessary for the student to successfully complete the laboratory portion of the course in order to earn a grade in the course. Math will be used to solve ratio, percentage, and simple algebraic problems. Also included are the designing, reading, and interpreting of graphs.

**Outcomes
Assessment
Strategies**

The instructor will choose from the following methods of assessment: exams, quizzes, lab exercises, written reports, oral reports, group projects, class participation, homework assignments, and field trips. The instructor shall detail the methods to be used to the students at the beginning of the class.

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

(note: topics may be selected in any order by each instructor)

- Explain the nature and history of oceanography as a science
- Discuss the structure and evolution of the earth's ocean basins and coastlines.
- Discuss the mechanics of waves, currents, and tides
- Describe the major chemical and physical properties of seawater and the interaction of these properties.
- Discuss marine biology in terms of habitats and zones, life in the oceans.
- Discuss how humans impact the marine environment in terms of resources from the sea and marine pollution.
- Other topics as desired by the instructor.

Topics to be covered include:Oceanography as a science

- The scientific method as it applies to oceanography

Course reviewer
comments

Key: 4104