

CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA
ACADEMIC SENATE

GENERAL EDUCATION COMMITTEE

REPORT TO

THE ACADEMIC SENATE

GE-110-156

GEO 1010 – Physical Geography (GE B1)

General Education Committee

Date: 2/4/2016

**Executive Committee
Received and Forwarded**

Date: 5/17/16

Academic Senate

**Date: 5/25/16
First Reading
06/01/2016
Second Reading**

BACKGROUND:

The Department of Geography and Anthropology modified a GE B1 existing course for the same GE area.

RESOURCES CONSULTED:

Faculty
Department Chairs
Associate Deans
Deans
Office of Academic Programs

DISCUSSION:

The GE Committee reviewed the ECO for this course and found it to satisfy the GE SLO's and other requirements of GE Area B1.

RECOMMENDATION:

The GE Committee recommends approval of GE-110156 (GEO 1010-Physical Geography for Area B1).





GEO - 1010 - Physical Geography

C. Course - New General Education* Updated

General Catalog Information

○ ****READ BEFORE YOU BEGIN****

○

1. Import curriculum data from the Catalog by clicking on the following icon . It is a BEST PRACTICE to always import data on existing courses. This will limit the opportunity for data errors.
2. Turn the help text on by clicking on the following icon .
3. All fields with an asterisk (*) are required fields. If left blank, the request will not be launched and cannot be acted upon.
4. Run and attach an impact report by clicking  to show all courses and programs impacted by this proposal.
5. Attach additional documentation by clicking .

○ Department*

Geography and Anthropology

○ Semester Subject Area*

GEO

Semester Catalog Number*

1010

○ Quarter Subject Area

GEO

Quarter Catalog Number

101

○ Course Title*

Physical Geography

○ Units*

(2)

○ C/S Classification*

C-01 (Large Lecture)

○ To view C/S Classification Long Description click: http://www.epp.edu/~academic-programs/scheduling/Documents/Curriculum%20Guide/Appendix_C_CS_Classification.pdf

○ Component*

Lecture

○ Instruction Mode*

Face-to-Face

Fully Asynchronous

Hybrid w/Asynchronous Component

Web-Assisted

○ Grading Basis*

Graded Only

○ Repeat Basis*

May be taken only once

○ If it may be taken multiple times, limit on number of enrollments

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- **Cross Listed Course Subject Area and Catalog Nbr (if offered with another department)**
- **Dual Listed Course Subject Area and Catalog number (If offered as lower/upper division or ugrd/grad)**
- **Choose appropriate type(s) of course(s)***

- Major Course
- Service Course
- GE Course
- None of the above

- **General Education Area / Subarea***
B1

- **To view the General Education SubArea definitions, click <http://www.cpp.edu/~academic-programs/scheduling/Documents/Ch.3-GeneralEducationProposals.pdf>.**

- **I. Catalog Description**

- **Catalog Description**

Basic principles of physical geography. Significance of earth-related distribution patterns with reference to their effect on human activities. 2 lecture discussions, require concurrent enrolment with GEO1010L. Meets GE requirement in Area B1.

- **II. Required Coursework and Background**

- **Prerequisite(s)**

- **Corequisite(s)**

GEO 1010L

- **Pre or Corequisite(s)**

- **Concurrent**

- **III. Expected Outcomes**

- **List the knowledge, skills, or abilities which students should possess upon completing the course.***

The student will have the ability to:• Understanding the breadth of physical geography and its related themes of systems and environment• Appreciate the interconnectedness of natural processes occurring on Earth, both spatially and temporally• Identify absolute and relative locations on the Earth's surface• Use some of the quantitative tools and methods used to explore and model natural phenomena• Comprehend major concepts related to systems and cycles of weather and climate, the solid earth, landform evolution, glaciations, and the biosphere• Perform basic scientific writing and research skills• Evaluate different approaches to physical geography study and methods of geographic observation.

- **If this is a course for the major, describe how these outcomes relate to the mission, goals and objectives of the major program.**

The course helps students to obtain knowledge in the physical geography area (GEO SLO1); to be introduced to research, analysis and communication skills (GEO SLO2, SLO3).

- **Explain how the course meets the description of the GE SubArea(s). Please select appropriate outcomes according to the GE Area/SLO mapping.**

GEO 1010/1010L meets the GE area B1 as detailed below.

- **Describe how these outcomes relate to the associated GE Learning Outcomes listed below.***

1. (GE SLO 1a, 1d) Identify and articulate major concepts related to the four spheres of the natural environment (atmosphere, lithosphere, hydrosphere, and biosphere) and their graphic based interactions.
2. (GE SLOs 1e, 2a) Use some of the quantitative tools and methods to explore, model, and draw conclusions on natural environmental phenomena
3. (GE SLOs 1a, 1d, 1e) Identify and articulate absolute and relative locations on the Earth's surface and their significance associated with the physical environment and human activities
4. (GE SLOs 1a, 1d) Identify and articulate the interconnectedness of natural processes occurring on Earth, both spatially and temporally
5. (GE SLOs 1a, 2a) Perform basic scientific writing and research skills

- **General Education Outcomes***

Ia. Write effectively for various audiences

Id. Construct arguments based on sound evidence and reasoning to support an opinion or conclusion.

Ie. Apply and communicate quantitative arguments using equations and graphical representations of data.

IIa. Apply scientific methods and models to draw quantitative and qualitative conclusions about the physical and natural world.

- **To view the mapping, click <https://www.cpp.edu/~academic-programs/Documents/GE%20SLO%20Mapping.pdf>**

- **IV. Instructional Materials**

- **Provide bibliography that includes texts that may be used as the primary source for instruction, and other appropriate reference materials to be used in instruction. The reference list should be current, arranged alphabetically by author and the materials should be listed in accepted bibliographic form.**
- **Instructional Materials***

1. R.W. Christopherson and M.L. Byrne. 2014. Geosystems: An Introduction to Physical Geography (Pearson Prentice Hall: New York)2. James F. Petersen, Dorothy Sack, and Robert E. Gabler, 2012. Physical Geography (Brooks Cole: Florence, KY)3. Darrel Hess. 2014. McKnight's Physical Geography: A Landscape Appreciation (Pearson Prentice Hall: New York)4. Alan Strahler. 2013. Introduction to Physical Geography (Wiley: New York)

- **Faculty are encouraged to make all materials accessible. Indicate with an asterisk those items that have had accessibility (ATI/Section 508) reviewed. For more information, <http://www.cpp.edu/~accessibility>**

- **V. Minimum Student Material**

- **List any materials, supplies, equipment, etc., which students must provide, such as notebooks, computers, internet access, special clothing or uniforms, safety equipment, lockers, sports equipment, etc. Note that materials that require the assessment of a fee may not be included unless the fee has been approved according to University procedures.**
- **Minimum Student Material***

Textbook, access to internet, computers with basic academic software.

○ **VI. Minimum College Facilities**

- **List the university facilities/equipment that will be required in order to offer this class, such as gymnastic equipment, special classroom, technological equipment, laboratories, etc.**
- **Minimum College Facilities***

Smart classroom, library, computer labs

○ **VII. Course Outline**

- **Describe specifically what will be included in the course content. This should not be a repetition of the course description but an expansion that provides information on specific material to be included in the class, e.g. lecture topics, skills to be taught, etc. This should not be a week-by-week guide unless all instructors are expected to follow that schedule.**
- **Course Outline***

- Introduction
- Themes in Physical Geography
- Topographic Maps
- Atmospheric Processes
 - Structure of the Atmosphere
 - Global Energy and Water Budget
 - Solar and Infrared Radiation
 - Climate Controls
 - Jet streams
 - Air Masses
 - Weather
 - Air Temperature
 - Pressure
 - Humidity
 - Precipitation
- Hydrospheric Processes
 - Water budget
 - storage
 - runoff
 - stream-flow
 - drainage

- Geomorphologic Processes
- Plate Tectonics and the Earth Energy System
- Folding, Faulting, Earthquakes and Volcanoes
- Lithosphere, Earth Materials (minerals, rocks, soils) and Structure
- Landforms
- Chemical weathering, mechanical weathering, mass wasting erosion
- Fluvial, glacial, coastal and Aeolian systems

- Biogeographic Processes
- Biosphere, including Earth-Atmosphere processes (e.g.) transpiration
- Ecosystems—components, relationships, communities, succession

- Environmental Issues
- Global Climate Change
- Local Pollution

○

○ **VIII. Instructional Methods**

- **Describe the type(s) of method(s) that are required or recommended for the instruction of this course (lectures, demonstrations, etc.). Include any method that is essential to the course, such as the use of particular tools or software.**
- **Instructional Methods***

1. Lectures/discussions
 2. Problem solving sessions in lab sessions
 3. Group and individual assignments/Projects, include computer based exercises and field observations
 4. Writing assignments and in class oral presentations
 5. Videos and other supplemental materials. Guest speakers and non-classroom assignments, as appropriate.

○ **IX. Evaluation of Outcomes**

- **Describe the methods to be used to evaluate students' learning, i.e. written exams, term papers, projects, participation, quizzes, attendance, etc.***

0. Subjective and objective examinations aimed at assessing student's ability of identifying the basic physical elements and laws that govern the physical geography processes, describe the interactions between human activities and these processes in historical and contemporary contexts, compare and contrast different physical processes in different scales, interfaces, and geographic regions, and solve quantitative and qualitative problems.

1. Assignments (may including problem solving with math and physical equations, computer based exercises, and field observation) to assess student's problem solving abilities and data observation and collection skills.
2. Written assignments with feedback process during the semester focusing on assessing the student's ability in finding, evaluating, and using data to construct arguments on environmental issues based on data analysis or computer models and to draw a sound conclusion
3. Oral presentation and class discussion aimed at assessing student's oral communication skills and the ability to identify climatic processes and the underlying physical elements.

○ **Describe the meaningful writing assignments to be included.***

Meaningful writing components: Students receive feedback from sequential assignments and lab reports with writing components that they can improve through the semester.

○ **Discuss how these methods may be used to address the course and program outcomes, as appropriate. Include or attach a matrix to align the evaluation methods to the outcomes.***

This course contributes to the Geography Student Learning Objectives in the following ways:

| Activity | GEO Department Objective No | | | |
|---------------------|-----------------------------|---|---|---|
| | 1 | 2 | 3 | 4 |
| Written assignments | I | I | | I |
| Class discussion | I | I | I | |
| Quizzes | I | | | |
| Midterm Exam | | I | | |
| Final Exam | | I | | |

A link to the Geography Student Learning Objectives may be found at http://www.cpp.edu/~class/geography-anthropology/docs/GEO_SLO.pdf

○ **If this is a general education course, discuss how these methods may be used to address the associated GE Learning Outcomes listed below. Include or attach a matrix to align the evaluation methods to the outcomes.***

| Gen. Ed. Outcomes | 1a | 1b | 1d | 1e | 2a |
|---------------------|----|----|----|----|----|
| Written assignments | I | | I | | I |
| Quizzes | | | | I | |
| Exams | | | | I | I |

| | |
|--------------------|-------|
| Problem Solving | |
| Assignments | I I I |
| Class discussion | I |
| Oral presentations | I |

- **X. This OPTIONAL Section is for describing Course/Department/College specific requirements.**
- **Department/ College Required ECO Information (Optional)**

We have included a lab as a co-requisite of the lecture and have included it in the GEO 1010/1010L course outline, because these two components are integrated in the teaching of the material. We have not significantly changed the way the course is taught, this modification in learning modules has been implemented to more accurately reflect the nature and pedagogy of the course. Labs are typically part of GEO 1010 courses and on many other campuses they are separate components.