

**GEOG 4 Course Outline as of Spring 2010****CATALOG INFORMATION**

Dept and Nbr: GEOG 4 Title: PHYSICAL GEOGRAPHY

Full Title: Physical Geography

Last Reviewed: 3/8/2021

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	0	5	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

**Catalog Description:**

Physical Geography is an introduction to the study of the Earth and the processes that form and shape its physical features and landforms. Topics include Earth dimensions and motions, map reading and map use, earth-sun relationships, weather and climate, and tectonic and surface processes. Emphasis is placed on recognizing, describing, and interpreting the spatial distribution of Earth features and the processes that shape these features. May include a field trip.

**Prerequisites/Corequisites:****Recommended Preparation:**

Eligibility for ENGL 100 or ESL 100

**Limits on Enrollment:****Schedule of Classes Information:**

Description: Physical Geography is an introduction to the study of the Earth and the processes that form and shape its physical features and landforms. Topics include Earth dimensions and motions, map reading and map use, earth-sun relationships, weather and climate, and tectonic

and surface processes. Emphasis is placed on recognizing, describing, and interpreting the spatial distribution of Earth features and the processes that shape these features. May include a field trip. (Grade or P/NP)

Prerequisites/Corequisites:

Recommended: Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Transfer Credit: CSU;UC.

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>		Effective:	Inactive:
	C	Natural Sciences	Fall 1981	
<b>CSU GE:</b>	<b>Transfer Area</b>		Effective:	Inactive:
	B1	Physical Science	Fall 1981	
<b>IGETC:</b>	<b>Transfer Area</b>		Effective:	Inactive:
	5A	Physical Sciences	Fall 1981	
<b>CSU Transfer:</b>	Transferable	Effective:	Fall 1981	Inactive:
<b>UC Transfer:</b>	Transferable	Effective:	Fall 1981	Inactive:

### **CID:**

CID Descriptor: GEOG 110 Introduction to Physical Geography

SRJC Equivalent Course(s): GEOG4

### **Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

### **Outcomes and Objectives:**

Upon completion of this course, the student will be able to:

1. Define the nature of geography as a science.
2. Identify and describe fundamental geographical tools.
3. Find and describe locations on maps.
4. Identify and evaluate map features.
5. Draw and interpret isolines.
6. Explain Earth seasonality, variation in day lengths and time zones.
7. Describe the mechanisms of heat transfer and apply this knowledge to the Earth's radiation budget, greenhouse effect, ozone depletion, and climate change.
8. Define and describe the major components of climate and weather; recognize and interpret their global distribution.
9. Analyze climates using climate classification models.
10. Analyze the origin, structure, and spatial distribution of the Earth's features and processes.

### **Topics and Scope:**

Topics will include, but are not limited to:

- I. Introduction to science, the scientific method and geography as a science
- II. Introduction to Earth
  - A. Environmental spheres
  - B. Geographic grid
  - C. Earth movements
  - D. Seasons and seasonality
  - E. Time
- III. Geographic techniques and tools
  - A. Maps and mapmaking
    - 1. Types
    - 2. Scale
    - 3. Projections
    - 4. Isolines
  - B. Geographic Information Systems (GIS)
  - C. Other
- IV. Atmosphere
  - A. Composition
  - B. Vertical structure
- V. Global energy systems
  - A. Electromagnetic spectrum
  - B. Mechanisms of heat transfer
  - C. Insolation
  - D. Energy budget
- VI. Surface temperatures
  - A. Controlling factors
  - B. Global and seasonal patterns
- VII. Atmospheric pressure
  - A. Pressure, density, and temperature
  - B. Mapping pressure
  - C. Cyclones and anticyclones
  - D. Global and seasonal patterns
- VIII. Wind
  - A. Direction
  - B. Speed
  - C. Global, seasonal and local patterns
- IX. Water and atmospheric moisture
  - A. Properties
  - B. Hydrologic cycle
  - C. Humidity
  - D. Adiabatic processes
  - E. Clouds and cloud formation
  - F. Fog and fog formation
  - G. Stability
  - H. Precipitation formation
  - I. Global precipitation patterns
- X. Weather
  - A. Air masses
  - B. Midlatitude
  - C. Tropical and Severe
- XI. Climate
  - A. Classification
  - B. Global distribution

- C. Global climate change
- XII. Earth processes and physical features
  - A. Earth structure
  - B. Rock cycle
  - C. Plate tectonic theory
  - D. Folding and faulting
  - E. Volcanism
- XIII. Weathering, mass wasting and erosion
- XIV. Geomorphology (include at least 2 of the 5)
  - A. Fluvial
  - B. Coastal
  - C. Arid and aeolian
  - D. Glacial
  - E. Karst

Optional topics may include

- XV. Biosphere
  - A. Biogeochemical cycles
  - B. Biomes
    - 1. Controlling factors
    - 2. Global Distribution
- XVI. Soils
  - A. Formation and factors
  - B. Characteristics and properties
  - C. Profiles and classification
  - D. Global distribution

### **Assignment:**

1. Textbook readings and/or assigned readings from journals, newspaper, and websites. Reading will vary depending on the topic but will average approximately 20-30 pages per week.
2. 5-12 homework assignments and/or in-class activities including written or problem solving exercises, map reading and interpretation, locating places and features on maps or models, climate classification, and field trip and/or current event reports.
3. 3-5 examinations based on reading and lecture material. Exams may be cumulative or unit exams, and will include a combination of objective and written responses.
4. Instructor may choose to include 2-5 map or other quizzes in addition to examinations.
5. Instructor may schedule a field trip for the class outside of normal class hours.

### **Methods of Evaluation/Basis of Grade:**

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Written homework, current event reports.
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Writing 0 - 10%
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**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems, in-class activities.

Problem solving  
20 - 40%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None

Skill Demonstrations  
0 - 0%

**Exams:** All forms of formal testing, other than skill performance exams.

Objective examinations that include multiple choice, true false, matching, completion, problem solving, short answer or essay questions. Map or other quizzes.

Exams  
60 - 80%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

Participation in class activities. Field trip attendance and participation (if applicable).

Other Category  
0 - 10%

### **Representative Textbooks and Materials:**

Physical Geography: A Landscape Appreciation, 9th edition. McKnight, Tom L. and Darrel Hess. Prentice Hall: 2007.

Geosystems: An Introduction to Physical Geography, 7th edition. Christopherson, Robert W. Prentice Hall: 2009.

Elemental Geosystems, 5th edition. Christopherson, Robert W., Prentice Hall: 2007.

Introducing Physical Geography, 4th edition. Strahler, Alan and Arthur Strahler. John Wiley & Sons: 2006.

Discovering Physical Geography. Arbogast, Alan F. John Wiley & Sons: 2007.

Visualizing Physical Geography, 1st edition. Strahler, Alan H. John Wiley & Sons: 2008

Instructor Prepared Materials