

**GEOG 4 Course Outline as of Summer 2018****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**

### **Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Describe fundamental geographic concepts and techniques.
2. Use, analyze and interpret maps.
3. Examine the dynamic relationship between the Earth and Sun and how this relationship affects the Earth system.
4. Identify Earth's physical features, explain the process that shape them, and interpret their spatial distribution.

### **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 and other readings (10-20 pages per class meeting)
2. Homework assignments (written and problem solving) (5-15)
3. In-class activities (0-18)
4. Exams (3-6)
5. Map and/or other quizzes (0-18)
6. Field trip(s) (0-2)

### **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.

Homework assignments	Writing 0 - 10%
<b>Problem Solving:</b> Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.	
Homework assignments, in-class activities	Problem solving 20 - 40%
<b>Skill Demonstrations:</b> All skill-based and physical demonstrations used for assessment purposes including skill performance exams.	
None	Skill Demonstrations 0 - 0%
<b>Exams:</b> All forms of formal testing, other than skill performance exams.	
Objective examinations (multiple choice, true false, matching, completion, problem solving, short answer and/or essay questions), quizzes (map or other)	Exams 50 - 80%
<b>Other:</b> 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:**

McKnight's Physical Geography: A Landscape, 11th edition. Hess, Darrel and Dennis G Tasa, Illustrator. Prentice Hall: 2014.

Geosystems: An Introduction to Physical Geography, 9th edition. Christopherson, Robert W. Prentice Hall: 2014.

Elemental Geosystems, 7th edition. Christopherson, Robert W., Prentice Hall: 2013.

Introducing Physical Geography, 6th edition. Strahler, Alan. John Wiley & Sons: 2013.

Discovering Physical Geography, 3rd edition. Arbogast, Alan F. John Wiley & Sons: 2014.

Living Physical Geography, 1st edition. Gervais, Bruce. W.H. Freeman & Co.: 2015.