

COURSE OUTLINE

Geography 101 (C-ID Number: GEOG 110)
Physical Geography (C-ID Title: Introduction to Physical Geography)

I. Catalog Statement

Geography 101 is a spatial study of the Earth's dynamic physical systems and processes. Topics include Earth-sun geometry, weather, climate, water, landforms, soil, and the biosphere. Emphasis is on the interrelationships among environmental and human systems and processes and their resulting patterns and distributions. Tools of geographic inquiry are also briefly covered; they may include: maps, remote sensing, Geographic Information Systems (GIS) and Global Positioning Systems (GPS).

Total Lecture Units: 3.0

Total Course Units: 3.0

Total Lecture Hours: 48.0

Total Faculty Contact Hours: 48.0

Prerequisite: Eligibility for English 120 or ESL 151.

II. Course Entry Expectations

Skill Level Ranges: Reading 5, Writing 5, Listening/Speaking 5, Math 3.

Prior to enrolling in the course, the student should be able to:

1. understand college-level reading selections;
2. take college-level lecture notes and follow complex oral directions;
3. learn material by participating in class discussions and lectures;
4. perform basic mathematical functions and operations of addition, subtraction, multiplication, and division of signed numbers as well as solve simple equations;
5. communicate learning, conceptual understanding and critical analysis skills through writing research papers, essay exams, or other types of writing assignments.

III. Course Exit Standards

At the conclusion of this course, the student should be able to demonstrate critical thinking skills and an understanding of:

1. the importance of solar energy to the earth system and its resulting effects on weather, climate, hydrology, and other external earth processes;
2. the complex interactions between the atmosphere, hydrosphere, biosphere, and

- lithosphere;
3. the interaction between human activities and these earth spheres.

IV. <u>Course Content</u>	Total Faculty Contact Hours = 48 hours
A. Introduction to Geography	1 hour
1. The nature of geography	
2. The geographical viewpoint	
B. Earth-Sun Relationships	3 hours
1. Earth's place in space and geometry	
2. The motions and positions of the earth in space	
a. Revolution	
b. Rotation	
c. Orientation in space	
3. The seasons	
a. Solstices	
b. Equinoxes	
4. Latitude, Longitude and Time Zones	
C. The Geographical Aspects of Weather and Climate	16 hours
1. The composition of the atmosphere	
2. The structure of the atmosphere	
3. The elements of weather	
a. Solar radiation	
1. The nature of solar radiation	
2. The reception of solar radiation at the outer boundary of the earth's atmosphere	
3. The passage of solar radiation through the earth's surface	
4. The reception of solar radiation at the earth's surface	
5. The geographical distribution of solar radiation at the earth's surface	
b. Air temperature	
1. The absorption of terrestrial radiation in the earth's atmosphere	
2. The greenhouse effect	
3. The geographical distribution of air temperature	
c. Atmospheric moisture and precipitation	
1. The phases of water	
2. Humidity	
3. Condensation processes	
4. Precipitation processes	
5. The geographical distribution of precipitation	
d. Atmospheric pressure and wind	
1. Geographical distribution of pressure	
2. Relation of wind to pressure	
3. The earth's surface winds	

- 4. Local winds
- e. Air masses and cyclonic storms
 - 1. Air masses and fronts
 - 2. Atmospheric disturbances

- D. The Geographical Aspects of Climate 6 hours
 - 1. The modified Köppen classification of climate
 - a. Tropical climates
 - b. Dry climates
 - c. Mesothermal climates
 - d. Microthermal climates
 - e. Polar climates
 - f. Highland climates

- E. Natural Vegetation and Characteristic Fauna 4 hours
 - 1. Controls on vegetation and fauna
 - 2. The world's major biomes
 - 3. Geographical distribution of biomes
 - 4. Some key historical migrations of fauna

- F. The Geographical Aspect of Soil 2 hours
 - 1. Factors of soil formation.
 - 2. Characteristics of soil
 - 3. Soil classes
 - 4. Geographical distribution of soils

- G. The Geographical Aspects of Landforms 16 hours
 - 1. The internal structure of the earth
 - 2. Plate tectonics
 - 3. Endogeneous energy in the creation of landforms
 - a. Diastrophism
 - b. Plate tectonics
 - 4. Exogeneous energy in the creation of landforms
 - a. Weathering of rock
 - b. Gradation of running water
 - c. Gradation by glaciers
 - d. Gradation by ocean waves
 - e. Gradation by wind
 - f. Gradation by mass wasting

V. **Methods of Instruction**

The following methods of instruction may be used in the course:

- 1. lecture-discussion;
- 2. small group sessions;

3. multimedia presentations;
4. student projects and presentations;
5. online assignments and projects;
6. local field trips.

VI . Out of Class Assignments

The following out of class assignments may be used in the course:

1. creating content in preparation for in-class group presentations;
2. research and writing assignment addressing a topic relative to the course content;
3. online lessons completed with Moodle or other approved LMS.

VII. Methods of Evaluation

The following methods of evaluation may be used in the course:

1. unit quizzes and exams;
2. mid-term exams;
3. research papers (e.g., effects of climate change on Los Angeles);
4. student presentations (e.g., group presentation on local weather observations);
5. student projects (e.g., research poster on post-fire debris flows);
6. online assignments (e.g., Moodle lesson on earth's atmospheric layers);
7. final examination.

VIII. Textbook(s)

Hess, Darrel, *McKnight's Physical Geography, 10th Edition*.

Upper Saddle River: Prentice Hall, 2010. Print.

13th Grade Textbook Reading Level. ISBN: 978-0321677341.

IX. Student Learning Outcomes

Upon successful completion of the required coursework in Physical Geography, the student will be able to demonstrate critical thinking skills and an understanding of:

1. the earth's place in space and the complex interactions between the earth and sun;
2. the functions of the atmosphere, hydrosphere, biosphere, and lithosphere including internal and external earth processes and their impact on landforms;
3. the complex interactions between these earth spheres;
4. the impact of human activities upon these earth spheres including climate change;
5. the spatial aspects of the world's biophysical environment.

Justification

Geography 101 is a required course for the Associate in Arts for Transfer degree in Geography. This course is related to the college goal of continuing the development of AA and AS-T degrees. The Geography AA-T degree is accepted by the California

State Universities to which our students most frequently transfer.