El Camino College

COURSE OUTLINE OF RECORD - Official

I. GENERAL COURSE INFORMATION

Subject and Number: Geography 1
Descriptive Title: Physical Geography

Course Disciplines: Geography
Earth Science

Division: Natural Sciences

Catalog Description: This course describes and explains the physical elements of geography. The topics include maps, earth-sun relationships, elements of weather and climate, vegetation patterns, soil types, plate tectonics, volcanism, tectonic activity and related landforms, weathering and mass wasting, and the landforms created by running water, glaciers, waves and wind.

Conditions of Enrollment: **Recommended Preparation**
English 84

Course Length: [X] Full Term [ ] Other (Specify number of weeks):
Hours Lecture: 3.00 hours per week [ ] TBA
Hours Laboratory: 0 hours per week [ ] TBA
Course Units: 3.00

Grading Method: Letter
Credit Status Associate Degree Credit

Transfer CSU: [X] Effective Date: Prior to July 1992
Transfer UC: [X] Effective Date: Prior to July 1992

General Education:

El Camino College: 1 – Natural Sciences
Term: Other:

CSU GE: B1 - Physical Science
Term: Other:

IGETC: 5A - Physical Science without Lab
Term: Other:

II. OUTCOMES AND OBJECTIVES

A. COURSE STUDENT LEARNING OUTCOMES (The course student learning outcomes are listed below, along with a representative assessment method for each. Student learning outcomes are not subject to review, revision or approval by the College Curriculum Committee)

1. Students can identify the salient features of the basic concepts of physical geography.
2. Students recognize and can accurately articulate how their environment affects humans' lives and how human activities affect their environment.
3. Students can identify the key elements of the scientific method (hypotheses, tests, observations, conclusions/interpretation of observations) in popular accounts of scientific research in magazines, newspapers, movies, and on the Internet.

The above SLOs were the most recent available SLOs at the time of course review. For the most current SLO statements, visit the El Camino College SLO webpage at http://www.elcamino.edu/academics/slo/.

B. Course Student Learning Objectives (The major learning objective for students enrolled in this course are listed below, along with a representative assessment method for each)

1. Explain basic characteristics of the earth such as size, shape, meridians and parallels, longitude and latitude, time zones, earth-sun relationships and seasons, and the atmosphere.

   Written homework
2. Compare and contrast the basic elements of weather and climate such as air temperature, air pressure, winds, clouds and precipitation, air masses and storms.

   Objective Exams
3. Explain the interrelationships among the climate, natural vegetation, and soil of many natural environments.

   Objective Exams
4. Compare and contrast the major rock classes of the earth's crust, plate tectonics, volcanism and tectonic activity (and related landforms), and weathering and mass wasting.

   Multiple Choice
5. Evaluate the erosional agents (water, ice, waves, and wind) and resulting landforms.

   Multiple Choice
6. Prepare and analyze maps, graphs, and cross-sections.

   Homework Problems
7. Utilize the scientific method to create a logical reasoning from observation to conclusion.

   Written homework

III. OUTLINE OF SUBJECT MATTER (Topics are detailed enough to enable a qualified instructor to determine the major areas that should be covered as well as ensure consistency from instructor to instructor and semester to semester.)

Lecture or	Approximate	Topic	Major Topic

Lab	Hours	Number	
Lecture	3	I	Introduction to physical geography A. Scientific method B. Earth's shape and size C. Meridians and parallels D. Longitude and latitude E. Time zones
Lecture	3	II	Earth-sun relationships and seasons A. The atmosphere B. Heating and cooling of the earth's surface and atmosphere
Lecture	12	III	Atmospheric Components and Processes A. Atmospheric composition, temperature, moisture, and pressure B. Global circulation and winds C. Air masses, cyclonic systems, and weather D. Disturbances (e.g. hurricanes, thunderstorms, tornadoes)
Lecture	6	IV	Climate Types of Climate Change A. Koppen climate classification B. Climate types: temperature, precipitation, vegetation C. Climate change
Lecture	6	V	Geology and the Lithosphere A. Rock classes, formation processes, rock types B. Soil types C. Volcanism and tectonic activity D. Related landforms
Lecture	3	VI	Weathering, mass wasting, and erosion A. Diastrophism B. Causes and types of weathering, mass wasting, erosion C. Resulting landforms
Lecture	3	VII	Plate Tectonics A. Plate tectonics theory, mechanisms, landforms B. Earthquakes
Lecture	3	VIII	Fluvial Processes A. River erosion and depostion, and associated landforms B. Cycle of erosion C. Flooding
Lecture	3	IX	

			Water and the Environment A. Karst topography, processes, and landforms B. Hydrothermal processes and associated landforms
Lecture	6	X	Glaciers A. Types of glaciers B. Erosional and depositional landforms C. Climate change effects
Lecture	3	XI	Arid Topography A. Wind erosion and deposition B. Mesa and scarp terrain C. Wind power
Lecture	3	XII	Coastal Geography A. Ocean erosion and deposition B. Coastal landforms C. Coral reefs
Total Lecture Hours	54		
Total Laboratory Hours	0		
Total Hours	54		

IV. PRIMARY METHOD OF EVALUATION AND SAMPLE ASSIGNMENTS

A. **PRIMARY METHOD OF EVALUATION:**

Problem solving demonstrations (computational or non-computational)

B. **TYPICAL ASSIGNMENT USING PRIMARY METHOD OF EVALUATION:**

Calculate the average environmental lapse rate at different elevations for two mountains. If the ELR is a constant, calculate the average, then calculate it for other elevations by subtracting/adding proportionally. With your partner, brainstorm what a negative lapse rate would be and think of an example for when one might occur. Submit individual written responses that include your calculations

C. **COLLEGE-LEVEL CRITICAL THINKING ASSIGNMENTS:**

1. Select three of four possible weather station datasets to complete three climographs. Using temperature and precipitation data, plot the numbers on the graphs with red and blue colored pencils. With the aid of the Koppen Climate Classification map and chart, identify the major climate group for all three graphs.

Finally, use the textbook descriptions matched to the data and climographs to explain why certain climates have the conditions they do (e.g. the relationship between arid climates and air stability). Submit three different climographs to the instructor.

2. Order a stream network to find how large it is. Once the stream order is found, write a paragraph explaining 1) the relationship between stream order and the amount of discharge, and 2) one way humans can modify streams that would alter its order. Submit the ordered stream network and a paragraph explaining the concepts to the instructor.

D. **OTHER TYPICAL ASSESSMENT AND EVALUATION METHODS:**

Essay exams
Objective Exams
Quizzes
Reading reports
Written homework
Homework Problems
Term or other papers
Multiple Choice
Completion
Matching Items

V. INSTRUCTIONAL METHODS

Demonstration
Discussion
Internet Presentation/Resources
Lecture
Multimedia presentations
Other (please specify)
Wall Maps

Note: In compliance with Board Policies 1600 and 3410, Title 5 California Code of Regulations, the Rehabilitation Act of 1973, and Sections 504 and 508 of the Americans with Disabilities Act, instruction delivery shall provide access, full inclusion, and effective communication for students with disabilities.

VI. WORK OUTSIDE OF CLASS

Study
Answer questions

Required reading
Problem solving activities
Written work

Estimated Independent Study Hours per Week: 6

VII. TEXTS AND MATERIALS

A. **UP-TO-DATE REPRESENTATIVE TEXTBOOKS**
Darrell Hess. McKnight's Physical Geography: A Landscape Appreciation (10th Edition) . 12th ed. ed. Pearson, 2016.

B. **ALTERNATIVE TEXTBOOKS**

C. **REQUIRED SUPPLEMENTARY READINGS**

D. **OTHER REQUIRED MATERIALS**

VIII. CONDITIONS OF ENROLLMENT

A. Requisites (Course and Non-Course Prerequisites and Corequisites)

Requisites	Category and Justification

B. Requisite Skills

Requisite Skills

C. Recommended Preparations (Course and Non-Course)

Recommended Preparation	Category and Justification
Course Recommended Preparation English-84	

D. Recommended Skills

Recommended Skills
Students should be able to read, comprehend, and analyze college-level reading materials. Written responses to text are also required. English 84 is the preparatory course for these skills.

E. Enrollment Limitations

Enrollment Limitations and Category	Enrollment Limitations Impact

Course created by Jeanne Garrison on 10/01/1961.

BOARD APPROVAL DATE:

LAST BOARD APPROVAL DATE:

Last Reviewed and/or Revised by Julienne Gard on 10/08/2017