



El Camino College
COURSE OUTLINE OF RECORD – Official

Course Acronym:	GEOG
Course Number:	6
Descriptive Title:	Physical Geography Laboratory
Division:	Natural Sciences
Department:	Geography
Course Disciplines:	Geography
Catalog Description:	This course consists of laboratory exercises using the geographic grid and world time, earth-sun relationships, atmospheric processes and weather maps, climate classification, natural vegetation, and interpretation of landforms shown on topographic maps and aerial photographs.
Prerequisite:	Geography 1 with a minimum grade of C or concurrent enrollment
Co-requisite:	
Recommended Preparation:	
Enrollment Limitation:	
Hours Lecture (per week):	0
Hours Laboratory (per week):	3
Outside Study Hours:	0
Total Course Hours:	54
Course Units:	1
Grading Method:	Letter Grade only
Credit Status:	Credit, degree applicable
Transfer CSU:	Yes
Effective Date:	Prior to July 1992
Transfer UC:	Yes
Effective Date:	fall 1996
General Education: ECC	Area 1 - Natural Sciences
Term:	
Other:	
CSU GE:	Area B1 - Physical Universe and its Life Forms: Physical Science, Area B3 - Physical Universe and its Life Forms: Laborator Activity
Term:	
Other:	

	IGETC: Area 5A - Physical Science
	Term:
	Other:
	CalGETC:
	Term:
	Other:
Student Learning Outcomes:	SLOs 1) Students can identify the salient features of the basic concepts of physical geography. (This includes the ability to recall the definitions of the specialized vocabulary 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 in popular accounts of scientific research in magazines, newspapers, etc. ** The second and third SLOs have been in place for years, in addition to the first one that was already listed in this curriculum map.
Course Objectives:	1. Interpret and use various types of maps found in an atlas. 2. Solve practical problems dealing with the geographic grid, world time zones, and earth-sun relationships. 3. Make calculations dealing with various weather elements and also interpret weather maps. 4. Analyze and classify climates and analyze natural vegetation regions of the world. 5. Interpret topographic maps and aerial photographs, with emphasis on landforms made by streams, glaciers, waves and currents, wind, tectonic activity and volcanism.
Major Topics:	I. The Geographic Grid (3 hours, lab) A. Latitude & Parallels B. Longitude & Meridians C. Atlas use and map reading D. Antipodes II. World Time (3 hours, lab) A. Rotation & Longitude B. Time Zones C. International Date Line III. Earth-Sun Relationships (3 hours, lab) A. Seasons B. Length of Day and Night C. Latitude of the Sun D. Noon Sun Angle

- E. Sketching Sun Angles

IV. Atmospheric process and weather maps (7 hours, lab)

- A. Global Wind Patterns
- B. Global Pressure Belts
- C. Fronts
- D. Weather Maps

V. Climate classification, natural vegetation (7 hours, lab)

- A. Koppen Climate Classification
- B. California Climate
- C. Global Biomes
- D. California's Natural Vegetation

VI. Topographic maps and Map Scales (7 hours, lab)

- A. Topographic map symbols
- B. Map Scales
- C. Bar Scale
- D. Verbal Scale
- E. Representative Fraction

VII. Topographic Maps & Contour Lines (3 hours, lab)

- A. Elevation
- B. Gradient
- C. Topographic Profile
- D. Drawing Contour Lines

VIII. Rocks (3 hours, lab)

- A. Igneous Rocks and Identification
- B. Sedimentary Rocks and Identification
- C. Metamorphic Rocks and Identification

IX. Plate tectonics (3 hours, lab)

- A. Plates of the world
- B. Plate Boundaries
- C. Plate Movement
- D. California and Plate Tectonics

X. Volcanic landforms (3 hours, lab)

- A. Types of Volcanoes
- B. Sketching Volcanoes from interpreting a topographic map
- C. Calculate the slope gradient of the different volcanoes

XI. Aerial Photographs and their interpretation (3 hours, lab)

	A. Tropical Landscapes B. Desert Landscapes C. Mountain Landscapes D. Coastal Landscapes XII. Landforms made by glaciers (3 hours, lab) A. Type of Glaciers B. Alpine Glaciation and Erosional Landforms C. Alpine Glaciation and Depositional Landforms D. Interpreting Glacial Landforms from topographic maps XIII. Coastal landforms (3 hours, lab) A. Waves B. Erosion C. Sediment Transport D. Deposition XIV. Field Study (3 hours, lab) A. Local area to observe coastal landforms and processes
Total Lecture Hours:	0
Total Laboratory Hours:	54
Total Hours:	54
A.1. Primary Methods of Evaluation (Part 1 - CCN courses only):	
A.2. Primary Method of Evaluation (Part 2 - all courses; choose one):	2) Problem solving demonstrations (computational or non-computational)
Typical Assignment Using Primary Method of Evaluation:	On the map distributed in class, interpolate elevations and draw the remaining contour lines at intervals of 20 feet. Draw lightly at first with pencil and when satisfied with the entire pattern strengthen the lines. Label the lines with their elevation.
Critical Thinking Assignment 1:	Analyze a weather map for two consecutive days and interpret the map symbols for pressure, fronts, temperature, and wind. In a short essay forecast the weather conditions for the next day, based on the analysis of the previous two days.
Critical Thinking Assignment 2:	In one or two sentences, analyze and interpret the contour lines on a topographic map (distributed in class) to determine how glaciers formed the landscape in the past and how the landscape appears presently.
Other Evaluation Methods:	Laboratory Reports, Quizzes
Instructional Methods:	Discussion, Lab, Lecture, Multimedia presentations
If other:	Computer exercises, Lab manual and atlas (diagrams, maps, and aerial photos), wall maps, and white board.

	Alternate Site Activities
Work Outside of Class:	Course is lab only - minimum required hours satisfied by scheduled lab time
If Other:	
Up-To-Date Representative Texts:	Darrel Hess. <u>Physical Geography Laboratory Manual</u> . 13th ed. Pearson Publishing, 2022.
Alternative Texts:	El Camino College geography faculty created a lab manual that is used across all sections and edited in an ongoing manner. It is printed by the bookstore/Barnes&Noble for lab students to purchase. It contains 12-14 labs.
Required Supplementary Readings:	
Other Required Materials:	Calculator, ruler, a Physical Geography Textbook
Requisite:	Prerequisite
Category:	sequential
Requisite course(s): List both prerequisites and corequisites in this box.	GEOG 1
Requisite and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s).	An understanding of atmospheric circulation (wind patterns, pressure belts) GEOG 1 - Compare and contrast the basic elements of weather and climate such as air temperature, air pressure, winds, clouds and precipitation, air masses and storms. Knowledge and understanding of climate types of the world. GEOG 1 - Explain the interrelationships among the climate, natural vegetation, and soil of many natural environments. Understanding of various landforms and features, such as volcanoes, glaciers, streams. GEOG 1 - Evaluate the erosional agents (water, ice, waves, and wind) and resulting landforms.
Requisite Skill:	
Requisite Skill and Matching Skill(s): Bold the requisite skill(s). If applicable	
Requisite course:	
Requisite and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s).	
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Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	Jerry Brothen
Date:	11/06/1985
Original Board Approval Date:	
Last Reviewed and/or Revised by:	Julienne Gard
Date:	10/22/2025
Last Board Approval Date:	01/21/2026
Effective Term:	FA 2026