

GEOG M01L: PHYSICAL GEOGRAPHY LAB

Originator

rputnam

College

Moorpark College

Discipline (CB01A)

GEOG - Geography

Course Number (CB01B)

M01L

Course Title (CB02)

Physical Geography Lab

Banner/Short Title

Physical Geography Lab

Credit Type

Credit

Start Term

Fall 2022

Catalog Course Description

Introduces students to the physical processes that shape the earth's surface and the tools used to study these processes. Provides hands-on practice in landscape description, measurement and analysis.

Taxonomy of Programs (TOP) Code (CB03)

2206.00 - Geography

Course Credit Status (CB04)

D (Credit - Degree Applicable)

Course Transfer Status (CB05) (select one only)

A (Transferable to both UC and CSU)

Course Basic Skills Status (CB08)

N - The Course is Not a Basic Skills Course

SAM Priority Code (CB09)

E - Non-Occupational

Course Cooperative Work Experience Education Status (CB10)

N - Is Not Part of a Cooperative Work Experience Education Program

Course Classification Status (CB11)

Y - Credit Course

Educational Assistance Class Instruction (Approved Special Class) (CB13)

N - The Course is Not an Approved Special Class

Course Prior to Transfer Level (CB21)

Y - Not Applicable

Course Noncredit Category (CB22)

Y - Credit Course

Funding Agency Category (CB23)

Y - Not Applicable (Funding Not Used)

Course Program Status (CB24)

1 - Program Applicable

General Education Status (CB25)

Y - Not Applicable

Support Course Status (CB26)

N - Course is not a support course

Field trips

May be required

Faculty notes on field trips; include possible destinations or other pertinent information

Field trips may be held to local places where the skills of applied field geography can be practiced. Possible destinations include Wildwood Park (Thousand Oaks), Long Canyon (Simi Valley), or Malibu Creek State Park (Calabasas).

Grading method

(L) Letter Graded

Alternate grading methods

(O) Student Option- Letter/Pass

(P) Pass/No Pass Grading

Does this course require an instructional materials fee?

No

Repeatable for Credit

No

Is this course part of a family?

No

Units and Hours

Carnegie Unit Override

No

In-Class

Lecture

Activity

Laboratory

Minimum Contact/In-Class Laboratory Hours

52.5

Maximum Contact/In-Class Laboratory Hours

52.5

Total in-Class

Total in-Class

Outside-of-Class

Internship/Cooperative Work Experience

Paid**Unpaid****Total Outside-of-Class****Total Outside-of-Class****Total Student Learning****Total Student Learning****Total Minimum Student Learning Hours**

52.5

Total Maximum Student Learning Hours

52.5

Minimum Units (CB07)

1

Maximum Units (CB06)

1

Prerequisites

GEOG M01 or concurrent enrollment

Entrance Skills**Entrance Skills**

GEOG M01

Prerequisite Course Objectives

GEOG M01-recognize the construction and function of maps and differentiate between common map projections; use and interpret a variety of maps.

GEOG M01-define the components of the atmosphere and its circulation patterns; construct a model of earth's energy budget and describe solar radiation and the heating of the atmosphere.

GEOG M01-identify the major climate zones and list the forces that produce climate zones and the conditions that cause changes in the climate.

GEOG M01-explain soil formation and soil properties, horizons, and erosion; illustrate the rock cycle and describe the types of rocks on earth and the processes that fuel the rock cycle.

GEOG M01-describe the processes that form continental and oceanic crust and relate the three types of plate collisions, and identify specific examples of each; describe the relationship between faulting, folding, and igneous activity to the development of landforms and explain the nature of earthquakes.

GEOG M01-explain the processes and effects of physical and chemical weathering and mass wasting.

GEOG M01-identify fluvial landforms and explain the processes of erosion and deposition responsible for deltas, lakes, floodplains, etc.; define and identify a drainage system and evaluate river discharge.

GEOG M01-review the process of dissolution and landscape features associated with Karst topography; describe weathering, erosion, and transport in arid regions; differentiate between alpine and continental glaciers; identify the components of coastal systems and describe the different types of shorelines and the processes that affect shoreline landscapes.

GEOG M01-demonstrate knowledge of GIS, GPS, and remote sensing technology and applications to real world problems in physical geography.

Requisite Justification**Requisite Type**

Prerequisite

Requisite

GEOG M01

Requisite Description

Course in a sequence

Level of Scrutiny/Justification

Closely related lecture/laboratory course

Requisite Type

Concurrent

Requisite

GEOG M01

Requisite Description

Corequisite

Level of Scrutiny/Justification

Closely related lecture/laboratory course

Student Learning Outcomes (CSLOs)**Upon satisfactory completion of the course, students will be able to:**

- | | |
|---|---|
| 1 | answer correctly 7 out of 10 questions related to climate zones, their distribution and underlying processes. |
|---|---|

Course Objectives**Upon satisfactory completion of the course, students will be able to:**

- | | |
|---|--|
| 1 | use various maps to locate and analyze spatial data. |
| 2 | recognize and explain the spatial distribution of physical features and processes such as seismic activity, landscapes, climate zones, soil erosion, and ecosystems. |
| 3 | use topographic maps and satellite imagery to interpret the effects of geologic processes (eg. tectonic, volcanic, fluvial and glacial) on the landscape. |
| 4 | navigate and visualize terrain features using topographic maps. |
| 5 | locate and plot sites on maps using longitude and latitude. |
| 6 | interpret and understand the limitations of a variety of map projections. |
| 7 | plot insolation curves and explain insolation's effect on temperature of a region. |
| 8 | read and interpret isothermal and isobaric maps to make short-term weather forecasts. |

Course Content**Lecture/Course Content**

N/A

Laboratory or Activity Content

- (10%) - Basic map making and analysis
 - Scale
 - Projections
 - Latitude/longitude, UTM
 - Cartographic principles
- (10%) - Topographic map interpretation and analysis
- (5%) - Remote sensing and Geographic Information Systems (GIS)
- (10%) - Field methods Navigation
 - GPS
 - Surveying
- (5%) - Earth-Sun relations and insolation
- (15%) - Weather and meteorology
 - Interpreting isobaric and isothermal maps
 - Atmospheric moisture
 - Atmospheric composition and pollution
- (10%) - Climate

- (10%) - Plate tectonics
 - Plate Boundaries
 - Volcanic and tectonic landforms
- (20%) - Geomorphology
 - Glacial processes
 - Fluvial processes
 - Mass movement
 - Coastal processes
- (5%)- Biomes

Methods of Evaluation

Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):

Written expression
 Problem solving exercises
 Skills demonstrations

Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):

Essay exams
 Group projects
 Individual projects
 Journals
 Laboratory activities
 Laboratory reports
 Objective exams
 Problem-solving exams
 Skills demonstrations
 Classroom Discussion
 Projects
 Participation
 Reports/Papers/Journals

Instructional Methodology

Specify the methods of instruction that may be employed in this course

Class activities
 Class discussions
 Collaborative group work
 Demonstrations
 Distance Education
 Field trips
 Instructor-guided interpretation and analysis
 Instructor-guided use of technology
 Laboratory activities

Describe specific examples of the methods the instructor will use:

- lectures and slideshows illustrating skills to be applied in lab
- demonstration of skills to be applied in lab

Representative Course Assignments

Writing Assignments

- Technical writing and data collection, including sketches of geomorphologic formations, maps, and graphs.
- Written responses to lab manual questions on the subject of physical geography.
- Narrative summaries of field notes.

Critical Thinking Assignments

- Analyze recent weather trends using data from the Moorpark College weather station.
- Analyze Vostok Research Station data to understand past climate conditions.
- Interpret the history of land forms from topographic profiles and contour maps.

Reading Assignments

- Read instructional manuals on how to operate geographic field tools such as sling psychrometers, theodolites, and GPS units.
- Read the narrative sections of meteorological maps, explaining current and projected weather conditions.

Skills Demonstrations

- Interpret climographs, meteorological charts, and data to make short-term weather predictions.
- Collect basic field data using handheld GPS units.
- Classify drainage patterns using remotely sensed data in Google Earth.

Outside Assignments**Articulation****C-ID Descriptor Number**

GEOG 111

Status

Approved

Additional C-ID Descriptor(s)**C-ID Descriptor(s)****Status**

GEOG 115 with GEOG M01

Approved

Equivalent Courses at 4 year institutions

University	Course ID	Course Title	Units
Cal State Northridge	GEOG 102	Physical Geography Lab	1
CSU Sacramento	GEOG 11	Lab Physical Geography	1
San Diego State	GEOG 101L	Earth's Physical Environment Laboratory	1

Comparable Courses within the VCCCD

GEOG V01L - Physical Geography Laboratory
 GEOG R101L - Physical Geography Laboratory

District General Education**A. Natural Sciences****A2. Physical Science**

Approved

B. Social and Behavioral Sciences**C. Humanities****D. Language and Rationality****E. Health and Physical Education/Kinesiology****F. Ethnic Studies/Gender Studies****Course is CSU transferable**

Yes

CSU Baccalaureate List effective term:

F1995

CSU GE-Breadth**Area A: English Language Communication and Critical Thinking****Area B: Scientific Inquiry and Quantitative Reasoning****B3 Laboratory Activity**

Approved

Area C: Arts and Humanities**Area D: Social Sciences****Area E: Lifelong Learning and Self-Development****Area F: Ethnic Studies****CSU Graduation Requirement in U.S. History, Constitution and American Ideals:****UC TCA****UC TCA**

Approved

IGETC**Area 1: English Communication****Area 2A: Mathematical Concepts & Quantitative Reasoning****Area 3: Arts and Humanities****Area 4: Social and Behavioral Sciences****Area 5: Physical and Biological Sciences****Area 5C: Laboratory Science**

Approved

Area 6: Languages Other than English (LOTE)**Textbooks and Lab Manuals****Resource Type**

Textbook

DescriptionHess, Darrel. *Physical Geography Laboratory Manual*. 12th ed., Pearson, 2020.**Resource Type**

Textbook

DescriptionChristopherson, Robert, and Charles Thomsen. *Applied Physical Geography: Geosystems in the Laboratory*. 10th ed., Pearson, 2018.

Library Resources

Assignments requiring library resources

Research using the Library's print and online resources.

Sufficient Library Resources exist

Yes

Example of Assignments Requiring Library Resources

Utilizing library resources, read journal articles in support of lab exercises.

Research Geography-related journal articles and/or periodicals to learn about seismic activity, landscapes, climate zones, soil erosion, and ecosystems.

Distance Education Addendum

Definitions

Distance Education Modalities

Hybrid (1%–50% online)
Hybrid (51%–99% online)
100% online

Faculty Certifications

Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.

Yes

Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities. Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.

Yes

Regular Effective/Substantive Contact

Hybrid (1%–50% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Regular Asynchronous discussion boards will be used to encourage discussion among students where they can compare and contrast/discuss /identify and analyze elements of course outcomes. Other Discussion boards will also be used for Q&A and general class discussion by students and instructor to facilitate student learning outcomes. E.g. - Students will use the discussion board in Canvas to discuss how climate change affects globalization.
E-mail	Email, class announcements and tools such as "Message Students Who" and "Assignment Comments" in Canvas will be used to regularly communicate with all students to clarify class content, remind of upcoming assignments, and provide immediate feedback to students on coursework to facilitate student learning outcomes. Students will be given multiple ways to email instructor through Canvas inbox and faculty provided email account through their own canvas email and school email.

Other DE (e.g., recorded lectures)

Faculty will use a variety of tools and media integrated within the LMS to help students reach SLO such as:

- o Recorded Lectures, Narrated Slides, Screencasts
- o Instructor created content
- o MC Online Library Resources
- o Canvas Peer Review Tool
- o Canvas Student Groups (Assignments, Discussions)
- o 3rd Party (Publisher) Tools (Mastering Geography)
- o Websites and Blogs
- o Multimedia (YouTube, Films on Demand, 3CMedia, Google Earth, Earth.nullschool, etc.)

Synchronous Dialog (e.g., online chat)

Scheduled synchronous sessions may be organized at the instructor’s discretion to review topics from the reading, asynchronous lectures, and other assigned material. This time may also be used have class or group discussions. Video conferencing software (such as Zoom) my be used for this purpose.

Hybrid (51%–99% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
------------------------------	--

Asynchronous Dialog (e.g., discussion board)	Regular Asynchronous discussion boards will be used to encourage discussion among students where they can compare and contrast/ discuss /identify and analyze elements of course outcomes. Other Discussion boards will also be used for Q&A and general class discussion by students and instructor to facilitate student learning outcomes. E.g. - Students will use the discussion board in Canvas to discuss how climate change affects globalization.
--	---

E-mail	Email, class announcements and tools such as “Message Students Who” and “Assignment Comments” in Canvas will be used to regularly communicate with all students to clarify class content, remind of upcoming assignments, and provide immediate feedback to students on coursework to facilitate student learning outcomes. Students will be given multiple ways to email instructor through Canvas inbox and faculty provided email account through their own canvas email and school email.
--------	---

Other DE (e.g., recorded lectures)	Faculty will use a variety of tools and media integrated within the LMS to help students reach SLO such as:
------------------------------------	---

- o Recorded Lectures, Narrated Slides, Screencasts
- o Instructor created content
- o MC Online Library Resources
- o Canvas Peer Review Tool
- o Canvas Student Groups (Assignments, Discussions)
- o 3rd Party (Publisher) Tools (Mastering Geography)
- o Websites and Blogs
- o Multimedia (YouTube, Films on Demand, 3CMedia, Google Earth, Earth.nullschool, etc.)

Synchronous Dialog (e.g., online chat)	Scheduled synchronous sessions may be organized at the instructor’s discretion to review topics from the reading, asynchronous lectures, and other assigned material. This time may also be used have class or group discussions. Video conferencing software (such as Zoom) my be used for this purpose.
--	---

100% online Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
------------------------------	--

Asynchronous Dialog (e.g., discussion board)	Regular Asynchronous discussion boards will be used to encourage discussion among students where they can compare and contrast/ discuss /identify and analyze elements of course outcomes. Other Discussion boards will also be used for Q&A and general class discussion by students and instructor to facilitate student learning outcomes. E.g. - Students will use the discussion board in Canvas to discuss how climate change affects globalization.
--	---

E-mail	Email, class announcements and tools such as “Message Students Who” and “Assignment Comments” in Canvas will be used to regularly communicate with all students to clarify class content, remind of upcoming assignments, and provide immediate feedback to students on coursework to facilitate student learning outcomes. Students will be given multiple ways to email instructor through Canvas inbox and faculty provided email account through their own canvas email and school email.
Other DE (e.g., recorded lectures)	Faculty will use a variety of tools and media integrated within the LMS to help students reach SLO such as: <ul style="list-style-type: none"> o Recorded Lectures, Narrated Slides, Screencasts o Instructor created content o MC Online Library Resources o Canvas Peer Review Tool o Canvas Student Groups (Assignments, Discussions) o 3rd Party (Publisher) Tools (Mastering Geography) o Websites and Blogs o Multimedia (YouTube, Films on Demand, 3CMedia, Google Earth, Earth.nullschool, etc.)
Synchronous Dialog (e.g., online chat)	Scheduled synchronous sessions may be organized at the instructor’s discretion to review topics from the reading, asynchronous lectures, and other assigned material. This time may also be used have class or group discussions. Video conferencing software (such as Zoom) may be used for this purpose.

Examinations

Hybrid (1%–50% online) Modality

On campus
Online

Hybrid (51%–99% online) Modality

On campus
Online

Primary Minimum Qualification

GEOGRAPHY

Review and Approval Dates

Department Chair

11/18/2021

Dean

11/18/2021

Technical Review

12/02/2021

Curriculum Committee

12/07/2021

DTRW-I

MM/DD/YYYY

Curriculum Committee

MM/DD/YYYY

Board

MM/DD/YYYY

CCCCO

MM/DD/YYYY

Control Number

CCC000428951

DOE/accreditation approval date

MM/DD/YYYY