

Geography 120- Physical Geography: Earth Systems CRN#5371
Cuyamaca College, Spring 2016

Instructor: Dr. Christa Farano

Class Meeting Times: T/Th 12:30 AM- 1:45 PM in H224

Required Text: *Elemental Geosystems*, 8th ed.

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Website for lecture supplements, maps, fieldtrips: <http://homework.sdmesa.edu/cfarano>

Course Description:

The major world patterns of the physical environment. Fundamental information & processes dealing with the earth's landforms, atmosphere, climate, natural vegetation, water, and soils with appropriate use of maps and charts. Students successfully completing Geography 101 will satisfy the physical science requirement (plus the 1 unit lab) at most four-year colleges. Equivalents: U.C - Geo 1, SDSU - Geo 101.

Student Learning Outcomes

Upon successful completion of this course, students will be able to:

- 1) Identify and utilize the guiding principles of physical geography to analyze and interpret geospatial relationships within and between Earth's four major environmental spheres (atmosphere, hydrosphere, lithosphere, and biosphere).
- 2) Outline the scientific method, describe its applications, and explain its relevance to real world problem solving.
- 3) Analyze geospatial data on maps, tables and graphs, and draw conclusions based on subsequent interpretations.
- 4) Describe seasonal Earth-Sun relations and explain resulting physical phenomena on Earth's surface.
- 5) Model atmospheric and oceanic circulation patterns in order to predict seasonal changes in the weather.
- 6) Utilize basic meteorological information to describe daily weather patterns, and explain the necessary conditions for the development of severe weather.
- 7) Compare and contrast daily, seasonal and annual atmospheric phenomena in order to differentiate between short-term weather processes and resulting long-term climate patterns.
- 8) Identify local, regional and global scale biogeographic patterns based on soil and climate factors, and evaluate their significance within the context of Earth's biosphere.
- 9) Describe the Theory of Plate Tectonics, provide scientific evidence in its support, and explain its significance within the field of geography.
- 10) Model surficial geomorphic processes and apply to the real world in order to explain the development and evolution of common landforms.
- 11) Compare and contrast competing scientific interpretations of geospatial data, and explain how divergent conclusions can be drawn from the analysis of similar data.
- 12) Evaluate the relationships between humans and their surrounding environment, and assess the significance of the human imprint on Earth's natural systems.

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Required Materials:

1. Elemental Geosystems 8th Ed; Christopherson.
2. Download "Physical Geography" handouts on my website: <http://homework.sdmesa.edu/cfarano>.
3. Four new scantron sheets (Form No. 882-ES), available at bookstore.
4. Several #2 pencils with new erasers.

Recommended Materials:

1. Any current World Atlas

Grading Policy:

All students will receive a letter grade unless prior arrangements for credit/no credit have been made. There will be no "incompletes." Grading will be based on a point system as described below:

Total possible points: Approximately 250 points (3 exams @ 65 pts each, 4 in-class assignments @ 5 pts each, 5 floating points, and two homework assignment worth up to 15 points apiece). Final letter grades will be assigned as follows:

90% of total points = A

80-89% of total points = B

70-79% of total points = C

66-69% of total points = D

Less than 60% of total points = F

METHODS OF EVALUATION

1. Exams – up to 195 points

There will be four (4) examinations worth 65 points each. The lowest test score will be dropped, and will not be factored into the final grade. Tests will be primarily objective; with 10/65 points of map identification. Questions will be drawn from textbook readings and lecture materials (including handouts or other supplements – please bring the handouts with you to class as they will help tremendously with mastering the material), homework assignments, slides, in-class activities, and films.

THERE WILL BE NO TEST MAKE-UPS. If you miss an exam due to an emergency and/or planned absence, I will automatically drop the missed exam for you. The purpose of dropping one exam is to accommodate those who are victims of an unexpected emergency/absence. Most students take all four exams and drop the lowest of the four exams they prepared for and completed on test days.

The map identification part of your exam will correspond with the FOUR map sets that are on the "downloads" page of my website. You will be tested on map guide #1 for test #1, map guide #2 for test #2, map guide #3 for test #3 and map guide #4 for test #4.

2. In-Class Assignments – (4 or 5 assignments) up to 25 points

Up to 4 assignments (5 pts each) will be completed in class during the semester. These assignments are due at the end of the same class period in which they are assigned and cannot be made up. Remaining “floating” points will be awarded for impromptu assignments and cannot be made up.

3. Required Homework Assignments (2 assignments) – up to 30 points

A. Entire Map Packet - up to 15 points - due IN CLASS on Tues, March 29- date of exam 2

Completion of a map packet which includes a subset of features from all world regions. One map guide will be on each exam. Two-point deduction per class period if submitted late. Grading plan: 1-point deduction (out of 15 total points) for every five features missing. Coloring map is optional, but neatness is essential. If the map is excessively sloppy, in the opinion of the instructor, a point will be deducted. Four map guides are on my website. The entire map packet – all FOUR guides (10 pages total) is due on March 29, 2016.

B. Discovering Urban/Physical Landscape Using Public Transit – up to 15 points – due IN CLASS on Thursday, May 19– the class meeting before final exam

Completion of a 10 page pre-assembled fieldtrip that highlights the uniqueness of San Diego’s physical setting. This exercise is an easy, fun way to learn geography, and will take approximately a half day to complete. It addresses themes learned in the classroom including water conservation, biogeography, resource issues, climate, and also requires the student to look at the connection between the natural and built environment. **You must include a picture of yourself at no fewer than THREE of the trolley stations AND include your original ticket stub or a copy of your transit pass. Assignment MUST BE TYPED OR IT WILL NOT BE ACCEPTED.** Activity posted on my website. TWO-POINT deduction per class if late.

Attendance Policy/ Adding and Dropping:

Class attendance is strongly advised; therefore attendance may be taken daily. District policy states that you may be dropped from the class if you miss the first day and your seat given away to another student. If you miss any class meeting in the first week of class, you will be dropped.

If you miss three class meetings in a row (after week 1), then you may be dropped from the course if I don't hear from you. If you miss class, make arrangements with a classmate to keep you informed on lecture topics, handouts, and assignments. Even though I have the authority to drop you from my class, it is your responsibility to add, drop, or withdraw from classes before the deadline given in the class schedule!!!

Accommodation:

Students with physical or learning disabilities will be accommodated with lecture/test materials by mutual agreement between individual students and the instructor. Please present any relevant paperwork at the beginning of the course.

Cheating:

First offense: Student receives a zero for the assignment;

Second offense: Student receive a zero for assignment PLUS must meet with Dean of Student Services prior to returning to class.

Tentative Lecture Schedule and Related Reading Assignments from Christopherson

TOPIC	CHAPTER(S)
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UNIT 1:Energy Atmosphere System

Essentials of Geography - Introduction	1
Solar Energy, Seasons, Atmosphere	2
Atmospheric Energy; Global Temperatures	3
Atmospheric and Oceanic Circulations	4

TEST 1 – Tuesday, February 23

UNIT 2: Water, Weather, and Climate Systems; Biogeography

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Atmospheric Water and Weather	5
Global Water Resources	6
Climate Systems and Change	7
Ecosystem Essentials	16
Terrestrial Biomes	17

SPRING BREAK MARCH 21-25

TEST 2 – Tuesday, March 29 – Homework #1 due – (ENTIRE MAP PACKET -10 pgs)

UNIT 3: Geomorphology

Thy Dynamic Planet	9
Tectonics, Earthquakes and Volcanoes	10
Weathering, Karst Landscapes, Mass Wasting	11

TEST 3 – Tuesday, April 26

UNIT 4: Geomorphology contd.

River Systems and Landforms	12
Oceans, Coastal, Deserts, Wind	13
Glaciers	14 <u>Homework #2 –(Trolley), Th May 19</u>

FINAL EXAM - Tuesday, May 24 @ 12:00 NOON - Extra Credit due

Holidays for this class: MARCH 21-25

EXTRA CREDIT- earn up to 15 points in any combo due in class 5/24

1. Class Field Trip – FREE- will be held the second or third weekend in March- leave Sat/Sun morning open if you wish to attend--- 3 hours meet time) – 5 points

I will be leading a half-day field trip to the Mission Trails Regional Park (approx. 3 hours) to look at local biogeography, geology and climatic principles. I will give you in-class handouts to assist you with plant identification in the field. We will look at three distinct plant communities: California Coastal Sage Scrub, Mixed Chaparral, and Oak Woodland. Numerous wildlife species also nest at this location sometime during the year. Please bring your binoculars and wear comfortable clothing for a non-strenuous hike. I will hand out a more detailed itinerary as we get closer to the date of the trip. Students in attendance for duration of activity will be given 5 points. There is nothing to download, fill out or submit for activity- attendance only.

SIX other extra credit opportunities (below) are on my website under “Fieldtrip” heading:

DON'T FORGET TO ATTACH YOUR RECEIPT AND A PICTURE OF YOURSELF AT VENUE. IF YOU DO NOT INCLUDE A PICTURE OF YOURSELF AT VENUE; NO CREDIT WILL BE ASSIGNED.

- Desert Tower – 10 points - \$2.00 (tell them you are a geo student on a fieldtrip)
- Point Cabrillo National Monument – 5 points – FREE April 16-24 - Natl Park Week
- UCSD Climate Change/Biogeography at Birch Aquarium– 5 points - \$12w/ student ID
- Water Conservation Garden – 5 points - FREE
- Ituri Rainforest Biome – 5 points - \$25 student semester pass
- Coast to Cactus- SD Natural History Museum – 5 points – FREE on first Tuesday of every month

AGAIN, YOU MAY ACCUMULATE 15 POINTS TOTAL EXTRA CREDIT IN ANY COMBINATION. IF YOU EXCEED 15 POINTS, THE EXCESS POINTS WILL NOT BE COUNTED TOWARD YOUR GRADE.

NOTE: This is a tentative syllabus; the content is subject to change by the instructor as the course progresses, and as is necessary and appropriate.