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GEOG 120- Physical Geography: Earth Systems CRN#5372
Cuyamaca College, Spring 2017

Instructor: Kimberly D. Dodson, GISP, MS
Class Meeting Times: T 5:30 – 8:20 PM in H224
January 31- May 30, 2017
Email: Kimberly.Dodson@gcccd.edu
Website: http://www.cuyamaca.edu/people/kimberly-dodson/default.aspx
3 hours lecture, 3 units
48-52.5 contact hours

Course Description:
Physical geography is the study of the patterns and processes that underlie the fundamental nature and dynamics of the physical world. Topics will be investigated from a systems perspective, with particular attention to the spatial relationships among the atmosphere, hydrosphere, lithosphere and biosphere. Global, regional and local environmental concerns will be discussed as relevant to course topics.

Prerequisite
None

Texts and References
1) Required:
   a. Arbogast, Alan F. *Discovering Physcial Geography* 3rd edition, 2014.
   b. Geog 120 by Lisa Chaddock (Handbook)
   c. Supplemental: as assigned by instructor.
   d. Harder, Christian. *The ArcGIS Book.* This book is a free online book at the following site: http://learn.arcgis.com/en/arcgis-book/.
   e. Pryde, Philip R. *San Diego: An Introduction to the Region* 5th edition, 2014.

Materials:
Required: Please bring the textbook: Discovery Physical Geography by Alan F. Arbogast and Geog 120 handbook to every class. Powerpoint slides, board diagrams, collaborative activities, and videos will be presented in class, and represented on all tests along with handouts and contents of textbook.

Special Materials Required of Student
Ruler and calculator.

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. ESL and International students who wish to use a paper dictionary may do so only after the instructor has examined it. Computerized language translators are not allowed.

Academic Integrity:
Students are expected to be honest and ethical at all times in their pursuit of academic goals. Students who are found in violation of district *Academic Honesty/Dishonesty Policies* (p. 28, Cuyamaca College Catalog), will receive an F grade on the assignment in question and may be referred for disciplinary action in accordance with one or more of the six stated actions in response to a violation.

See Cuyamaca College policy posted at http://www.cuyamaca.edu/campus-life/student-affairs/conduct.aspx about student conduct.

Plagiarism is misconduct.

Food Policy:
Lab classroom: no food or drink allowed except bottled water.

Class Policies:
No cell phone use: including talking on phone, texting, Internet access, etc. If an urgent phone call is necessary, please step outside to use phone. Students not adhering to class policy will be asked to step outside until student has completed phone use. Instruction during lab time will not be repeated if student steps outside of class to take a phone call.

An exception to the cell phone use in class may be during the GPS portion of the course, the instructor may have students use a mobile app on a smart phone.

Please be respectful of instructor and other students in class by not having loud conversations during lecture or lab time.

Instructor Contact:
Office: Instructor will be available to meet with individual students before or after class and every other Friday by appointment only.

Course Content
1) Introduction to the guiding principles of geography as applied to the physical world
2) Introduction to the scientific method and the principles of systems analysis
3) Basic training in map reading and spatial analysis
4) Modeling of Earth-Sun relations as applied to daily and seasonal changes in solar radiation
5) Analysis of the interactions within and between the atmosphere, hydrosphere, lithosphere and biosphere
6) Modeling of heat and energy flows within and between Earth's natural systems
7) Overview of atmospheric and oceanic structure, composition, circulation patterns and interactive dynamics
8) Introduction to the elements, controls and spatial patterns of weather and climate-related processes
9) Delineation of cycles and patterns within the biosphere
10) Survey of soil and vegetation distributions
11) Scientific analysis of the theory of plate tectonics
12) Survey of volcanic and tectonic processes and landforms
13) Overview of weathering, erosion and mass wasting processes
14) Survey of fluvial, Aeolian and glacial processes and landforms
15) Identification of key characteristics that define mountain, desert, coastal and interior environments
16) Assessment of global, regional and local environmental concerns as relevant to topic discussions

Course Objectives

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.

Method of Instruction

1) Integrated classroom lecture, discussion and demonstration
2) Small and large group discussion
3) In-class activities and independent homework/research projects
4) Field trips designed to link course materials to real world phenomena
5) Instructional slides, audio/video presentations
6) Auxiliary use of study groups, peer tutoring and/or instructional office hours

Out-of-Class Assignments

1) Required reading assignments in textbook or other supplementary reading sources
2) Problems to practice use of maps, graphs and analysis of meteorological phenomena, etc.
3) Small group/individual research projects

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.

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 252 points (3 exams @ 65 pts each, 4 in-class assignments @ 5 pts each, 5 floating points, and 4 homework assignment worth up to 8 points apiece).

	Points Possible Each	Total Points Possible
3 Exams	65	195
4 in-class assignments	5	20
4 homework assignments	8	32
Floating Points	5	5
Total Possible		252

Final letter grades will be assigned as follows:

225.00 – 252.00 points = A
200.00 – 224.99 points = B
175.00 – 199.99 = C
150 - 174.99 = D
Less 150 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 use a combination of objective, short answer formats, map identification and short essay formats. Exam questions may be drawn from readings in the textbook, lecture materials (including handouts or other supplements – please be sure to bring the handouts with you to class as they will help tremendously with mastering the material), homework assignments, slides, in-class activities, and films.

No make-up exams are given. 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.

2. In-Class Assignments – up to 25 points

Up to 4 assignments (5 pts each) will be completed in class throughout 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 points will be awarded for impromptu assignments and cannot be made up.

3. Required Homework Assignments (4 assignments) – up to 32 points

- **Homework Assignment #1 - up to 8 points - due in class on Tuesday, March 7, 2017**

Completion of marine debris mapping assignment.

- **Homework Assignment #2 - up to 8 points - due in class on Tuesday, April 18, 2017**

Completion of earth plates mapping assignment.

- **Homework Assignment #3 - up to 8 points - due in class on Tuesday, May 16, 2017**

Completion of tropical deforestation mapping assignment.

- **Homework Assignment #4 - up to 8 points - due in class on Tuesday, May 30, 2017**

Completion of research project of person who is making a difference in the change of geographic topics such as deforestation, wildfire prevention and environmental resource conservation. Examples will be given in class.

Attendance Policy/ Adding and Dropping:
Class attendance is strongly advised; therefore attendance will 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, 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!!!

Program Adjustment dates: January 30, 2017 – February 10, 2017
Last Day to Drop without "W" (semester length classes): February 10, 2017
Last day to drop semester length classes: April 28, 2017
See http://www.cuyamaca.edu/current-students/academic-calendars/default.aspx for additional important dates.

Field Trips
Extra Credit – You may accumulate up to 15 points in any combination

Future Fieldtrips outside of normal class time may be assigned for extra credit (5 points each field trip and 15 points maximum). Extra credit assignments for field trips will be due the day of the field trip. A waiver form must be signed and on file with the college for students to attend field trips. Forms will be provided and collected by instructor prior to each field trip. Additional information is to be provided later.

La Jolla Cove Saturday April 22, 2017 10:00 AM
Mission Trails Visitor Center self-guided tour
City of San Diego mobile app "Get It Done" to report flooding, pot holes or fallen trees within the city limits.

Tentative Lecture Schedule and Related Reading Assignments

DATE	TOPIC	CHAPTER READING DUE CLASS DATE	CHAPTER READING DUE CLASS DATE	Handouts as assigned.
January 30, 2017	**UNIT 1: Energy/ Atmosphere System -** Essentials of Geography – Introduction - Solar Energy, Seasons	***Discovering Physical Geography*** chapter reading:	***San Diego: An Introduction to the Region*** chapter reading**:**	
February 7, 2017	Global Temperatures Atmospheric Energy	**Ch 3 and Ch 4**		**Time Zones geoinquiry and Handbook In class #1 pages 1- 4**
February 14, 2017	**UNIT 2: Water, Weather, and Climate Systems; Biogeography**	**Ch 5 and Ch 6**		**Ocean/Wind geoinquiry and Handbook In class #5 pages 1 - 2**
February 21, 2017	Atmospheric Water and Weather Atmospheric and Oceanic Circulations	**Ch 7/Exam Review Chapters 3 – 7**	**Ch 1**	**Handbook In class #6 pages 1- 4**
February 28, 2017	**TEST 1 - Test 5:30 – 7:00 pm**			**In Class Assignment 7:00 pm – 8:20 pm**
March 7, 2017	Air Masses and Climate Systems and Change	**HW#1**	**Ch 3**	**Investigating biodiversity geoinquiry**
March 14, 2017	Ecosystem Essentials	**Ch 8 and Ch 9**	**Ch 18**	**Handbook In class #9 pages 1 – 4 and #10 pages 1 – 4**
March 21, 2017	Terrestrial Biomes	**Ch 10/Exam Review Chapters 8 – 10**		**Handbook Climograph from In class #10 19)**
April 4, 2017	**TEST 2 5:30 – 7:00 pm UNIT 3:Geomorphology** The Dynamic Planet Earth's structure	**In Class Assignment 7:00 pm – 8:20 pm**		**Rock types geoinguiry and Handbook In class #11 pages 1 – 6**
April 11, 2017	Tectonics, Earthquakes and Volcanoes	**Ch 11 and Ch 12**	**Ch 2**	

April 18, 2017	Oceans and coastal	**Ch 13/HW#2**	**Ch 17 and pages 201 - 203**	**Ocean features geoinquiry**
April 25, 2017	Weathering, Mass Wasting	**Ch 19**	**Ch 7**	**Dust Storm geoinquiry**
May 2, 2017	Global Water Resources and Karst Landscapes	**Ch 14/Exam Review Chapters 11 – 15 and 19**	**Ch 8**	
May 9, 2017	**TEST 3 5:30 – 7:00 pm**	**Ch 15**		**In Class Assignment 7:00 pm – 8:20 pm**
May 16, 2017	**UNIT 4: Geomorphology contd.** Glaciers	**Ch 16 and HW#3**		**Handbook In class #13 all pages**
May 23, 2017	Wind, River Systems and Landforms	**Ch 17/ Final Exam review Chapters 16-18**	**Ch 6**	
May 30, 2017	**FINAL EXAM 6:00 – 8:00 PM**	**Ch 18 and HW#4**		

Spring Recess for this class: March 27, 2017 – April 1, 2017

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.

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AGREEMENT & UNDERSTANDING OF SYLLABUS AND HONOR CODE

Geography 120, CRN 5372, Spring 2017

Syllabus

I have received a copy of and have read the syllabus for Geography 120, CRN 5372, Spring 2017. I understand the syllabus and the course requirements. By affixing my signature below, I agree to the syllabus as written and agree to abide by it.

Honor Code

1) Respect your fellow classmates! Report any behavior that is not conducive to success in the class and not supportive of other students.

2) Unethical behavior will not be tolerated. Students need to be held accountable and cheating will result in disciplinary action.

    a) If you catch someone cheating, confront the person about it.
    b) If a student sees another student cheating, offer to help them with the work if they are struggling, or offer to study together. They might be cheating because they are struggling.
    c) If the problem persists, report it to the instructor.

3) When working together on class material, do not copy other's work, but put it in your own words. When working with a partner, you must clearly specify who collected the data, if data collection occurred.
    a) Do not hand your work out to fellow classmates. Instead help them understand to guide them to an answer. Offer constructive help.
    b) Cheating on tests and quizzes is absolutely prohibited.
    c) Plagiarism is prohibited. Always reference others' work and use your own words from the gathered knowledge.
    d) If a person cheats off your work, you are as much at fault.

4) Take care of the lab equipment and lab environment. If a classmate leaves lab without cleaning up their workspace, and you can't catch them, make sure to clean the workspace.

5) Do not falsify data.

I have received a copy of and have read the syllabus for Geography 120, CRN 5372, Spring 2017. I understand the student-developed honor code. By affixing my signature below, I agree to the code as written and agree to abide by it.

Signature:_____ (demonstrates acceptance of syllabus AND code)

Date:_____

Print Name:_____