GEOGRAPHY 121 – PHYSICAL GEOGRAPHY: EARTH SYSTEMS LABORATORY

# CUYAMACA COLLEGE - FALL 2015

## T 11:00 AM-01:50 PM; RM H224; CRN:9779 CHRISTA FARANO, MA

## Instructor Contact: [christa.farano@gcccd.edu](mailto:christa.farano@gcccd.edu); I am also on campus T and Th from 8-12:15 pm in H224.

**Description**

This course is designed to explore the Earth’s physical environment, complementing either the physical geography lecture course (GEOG 120) or the Earth Science lecture course (GEOL 104) through practical applications of materials covered in these courses. This laboratory course enhances the observational and analytical skills that are vital to understanding Earth’s major physical and chemical systems including atmospheric, hydrospheric, lithospheric and biospheric processes and the Earth’s place within the Solar System. Exercises will utilize the methods of scientific inquiry to explore the Geographic Grid, Earth-Sun relationships; weather and climate; the rock cycle; plate tectonics, including faulting, earthquakes, hot spot volcanism and plate boundary dynamics; erosional and depositional environments; landform genesis, identification and geomorphic change; soil and vegetation distributions and habitat analysis. Students gain experience with map interpretation/analysis, unit conversions and dimensional analysis, field work using GPS, compass, clinometer, and other specialized equipment. Special attention is given to the unique local setting of San Diego County especially as exhibited in the Cuyamaca College Nature Preserve where field experiences are incorporated into laboratory exercises on a regular basis.

**Prerequisite:** “C” grade or higher or “Pass” in GEOG 120 or GEOL 104 or equivalent or concurrent enrollment in either course

**Textbooks:**

*Required*: 1) Physical Geography Lab Manual; 11th Ed by Darrell Hess; Prentice Hall Inc.;

*Strongly Recommended*: 2) any Physical Geography textbook;

*Recommended*: 3) Goode’s World Atlas, 21st Edition.

**Student Learning Outcomes**

Students who successfully complete GEOG 121 will be able to:

1. Demonstrate the ability to utilize the tools of physical geography and Earth science to collect data (for example, compasses, GPS receivers, psychrometers, etc.).
2. Demonstrate observational skills related to reading and modeling the geographic and geologic landscape (for example, relating changes in solar declination to seasonal variation; relating change in longitude to differences in time keeping; relating real-time weather observations to synoptic scale weather maps; developing and using morphologic classification systems (e.g. mafic vs felsic igneous rock classification, biologic taxonomy), relating stream offsets, sagponds and pressure ridges (as found on topographic maps) to lateral-fault location and direction and rate of displacement, etc.
3. Demonstrate the ability to recognize and name the individual components of the physical environment and of interrelationships between, and spatial patterns produced by these individual components (e.g. recognition of dominant plant species within Coastal Sage Scrub biome; recognition of species variation by habitat (e.g. north vs. south facing slopes) within a biome; recognition of typical San Diego weather features and patterns (e.g. inversions, sea-breezes, downslope adiabatics, synoptic–scale highs vs. mesoscale lows,) etc.
4. Demonstrate the technical skills to analyze and interpret data of physical geography and Earth sciences (e.g., use of analemma, topographic maps, sunoptic-scale weather maps, seismographs, hydrographs etc., application of conversion factors, graphing, isoline mapping, topologic profiling, etc.).
5. Use the methods of scientific inquiry to develop and test a variety of hypotheses related to physical geography/Earth science phenomena.

**Methods of Evaluation:**

* 12 laboratory exercises worth 5 points each, due at the end of each lab session (60 points).
* 7 unannounced closed book quizzes on the assigned readings, each worth 2 points (14 points).
* 3 exams worth 15 points each (45 points). The exams are open note, open book!

Grading Scale: 100-90% = A 119-107 total points required

89-80% = B 106-95 total points required

79-70% = C 94-83 total points required

69-60% = D 82-71 total points required

<60% = F <71 points

Grading Inquiries

All grade inquiries must be submitted in writing within 4 weeks of receiving the grade. The inquiry must be presented with the original assignment and you must include the following information:

a. Your name and the date when you are making this inquiry;

b. The date when the grade was returned to you;

c. The test, lab, or quiz number;

d. Problem number and exact wording of the problem;

e. A complete description of a correct answer to the problem and the source(s) or this information;

f. A clear explanation of why you think points were deducted; and

g. A clear explanation of why you think you deserve more credit based on your original answer in comparison with the correct answer.

However, if the instructor has made a simple math error in tabulating your grade total, you do not need to fill out the inquiry. Simply point the error out to the instructor.

Lab Exercise/Quiz/Test Make-Ups

There will be no makeups allowed of any laboratory exercise, quiz or exam, however the final lab, or “replacement lab” completion is voluntary and can replace lowest lab score.

Laboratory Exercises:

Besides correctness and accuracy, labs & exams will also be graded on legibility, neatness & cleanliness. Any lab or exam, which in the opinion of the instructor is sloppy, dirty or illegible, will be reduced by 1 point. Therefore, all labs and exams are to be neatly printed in pencil rather than written in script and/or with a pen. Lab exercises must be submitted in ***numerical order***. If there are one or more pages out of order, a point will be subtracted from that lab exercise.

**ALL** marked laboratory exercises, quizzes and exams are to be saved in the order given and placed in a folder; they should be brought to each lab class. Periodically, the instructor may collect the binders/folders in order to examine them for completeness. Students may use previous lab work to help them during class, so don't forget your stuff!

**ALL** binders/folders are to be returned to the instructor on the last day of class. If the laboratory exercises, quizzes & exams are not returned to the instructor by the last day of class, or if any of the contents are missing, the student’s final grade will be lowered by one full grade, so please, hang on to all your returned assignments! All lab courses in geography require all materials to be submitted at the end of the semester and have identical or very similar policies regarding lab work, absences and grading.

**Methods of Instruction:**

Brief lecture/introduction of each lab and open discussion of material. Please note: this class is VERY different from a typical lecture class. Most of the course consists of collaborative work between students as well as individual computations. Some field exercises may take place outside of the classroom. The instructor acts as a “facilitator” as opposed to a lecturer.

**Required Supplies:**

Several No. 2 pencils 3 feet of string

Large eraser Clear plastic ruler (with inches and centimeters)

Basic calculator Colored pencils (red, green, blue)

*Supplies and textbooks* *must be brought to each class session*; otherwise the student may be excused from that class meeting since he/she won't be able to complete the exercise...so again, remember to bring your lab stuff to each class, especially your lab book!

**Attendance Requirements:** You are expected to attend ALL classes. According to the Cuyamaca College catalog, page29:

1. “When absences exceed twice the number of hours that a class meets in one week for full semester-length classes, the instructor may institute an excessive absence drop. “
2. “Failure to attend the first class meeting may result in the student being dropped from the class.
3. “It is the student’s responsibility to officially withdraw from any classes not attended and to discuss anticipated absences with the instructor.”

Therefore, any student with more than two absences will be dropped by the instructor. If you miss a lab class, you will receive a zero for the day's assignment/s. Labs are only accepted during the class in which they are assigned. THERE ARE NO TEST MAKEUPS, so plan to be in class on test days. Likewise, students who miss the first class will also be dropped. Their seat may be given away to wait-listed students. In a nutshell, it is expected that you will plan to attend EVERY class period.

Many students find this course quite difficult because it is taught differently from a lecture course. In addition, it requires a major time commitment, especially with respect to preparation prior to each lab meeting. It is the student’s responsibility to drop all classes in which he/she is no longer attending. It is the instructor’s discretion to withdraw a student after the add/drop deadline due to excessive absences.Students who remain enrolled in a class beyond the published withdrawal deadline, as stated in the class schedule, will receive an evaluative letter grade in this class.

**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.

**Instructor Contact:**

Office: Instructor will be available to meet with individual students before and after class (and often during class depending on what the needs and circumstances are).

Mailbox: F100

mail: christa.farano@gcccd.edu (in the subject line, please tell me what class you are in, include time and school)

**Projected Schedule**

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| --- | --- |
| Week and Date of Class Meeting | **Topic** |
| 1/30/15 | Conversions, Location & Time – Ex\* 1,2,3 |
| 2/6/15 | Scales & Projections – Ex 4, 5 |
| 2/13/15 | HOLIDAY |
| 2/20/15 | Earth-Sun Relationships & Solar Angle – Ex 14, 15, handout |
| 2/27/15 | Isopleths & Insolation - Ex 6, 16 |
| **3/6/15** | **Exam #1** |
| 3/13/15 | Temperature & Pressure – Ex 17, 18 |
| 3/20/15 | Wind & Humidity – Ex 19, 20 |
| 3/27/15 | SPRING BREAK |
| 4/3/15 | Adiabatic Processes & Stability – Ex 21, 22 |
| 4/10/15 | Cyclones & Weather Maps – Ex 23, 24 |
| **4/17/15** | **Exam #2** |
| 4/24/15 | Water Resource Issues – campus walkabout-handout provided |
| 5/1/15 | Topographic Maps I & Compasses – Ex 7,8,9 |
| 5/8/15 | Topo Maps II, Stereophotos I & Landforms I – Ex 11, 40, 41 |
| 5/15/15 | Stereophotos II & Landforms II – Ex 44,47,48 |
| 5/22/15 | Replacement Lab (Substitute for lowest lab score) Plate Tectonics & Earthquakes |
| **5/29/15** | **Exam #3; 9:00 am-11:00 AM; H224** |

\*Ex is short for Exercises and corresponds with distinct topics or “chapters” in the lab book.

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**AGREEMENT & UNDERSTANDING OF SYLLABUS AND HONOR CODE**

**Geography 121, CRN 9370, Spring 2015**

**Syllabus**

I have received a copy of and have read the syllabus for Geography 121, CRN 9370, Spring 2015. 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.
   1. If you catch someone cheating, confront the person about it.
   2. 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.
   3. If the problem persists, report it to the instructor.
3. Group participation is encouraged during laboratory exercises, while stealing the ideas of others is strictly prohibited. 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.
   1. Do not hand your work out to fellow classmates. Instead help them understand to guide them to an answer. Offer constructive help.
   2. Cheating on tests and quizzes is absolutely prohibited.
   3. Plagiarism is prohibited. Always reference others’ work and use your own words from the gathered knowledge.
   4. 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. Data should not be fabricated or changed in a lab experiment.

I have received a copy of and have read the syllabus for Geography 121, CRN 9370, Spring 2015. 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:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_