

Geography 303: Climatology

SYLLABUS

Fall 2009 (#72095) MW 2:00-3:50 pm Building 1 Room 125

Instructor

Dr. Lin Wu

Office Location 5-145 **Office Hours** posted at <http://www.csupomona.edu/~lwu/web/schedule.htm>

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Required Text

Oliver and Hidore, Climatology: An Atmospheric Science, 2/E, Prentice Hall, 2002. ISBN: 0-13-092205-6

Catalog description

GEO 303 Climatology (4) Introduction to the basic elements in the climatic systems. Determinants of climatic variation through time and space. Methods of inquiry, including both qualitative and quantitative methods and computer assisted simulation in climatology. Reciprocal impact of climate and society. 4 hours lecture/problem solving. Prerequisites: One course from each of the following Sub-areas: A1, A2, A3 and B1, B2, B3 or permission of instructor. GE Synthesis course for Sub-area B4.

Course Goal

In the context of climatology, students will learn the basic principles and methodologies in physical sciences including problem definition, literature research, scientific data collection, and quantitative/qualitative analysis approaches. Students will have the opportunity to apply their knowledge and skills obtained in lower division GE or geography courses to investigate issues or to conduct research in climatology and to write their findings. Students majoring in Geography or other related fields will have the opportunity to enhance their understanding of the earth's physical environment and to explore various applications of climatology in their fields.

Topics

Detailed schedules, assigned readings, and due dates will be posted on Blackboard 9 (pilot).

Physical and dynamic Climatology

- Scopes of Climatology
- Energy balance and temperature
- Moisture
- Wind and pressure
- Weather systems

Regional climatology

- Scales and classification
- Tropical Climates
- Mid-latitude Climates
- Polar and highland Climates

Past and future climate

- Studying the past
- Causes of change
- Global warming

Applied Climatology

- Human response: health, architecture, urban design, etc.
- Climate resources: Agriculture, energy, industry, etc.
- Human influence: Ozone depletion, acid rain, etc.

Examinations

There will be a midterm and a final for the course. The exams are intended to test your knowledge of the course materials. You are responsible for the materials assigned in the reading as well as covered by the lectures, assignments and class activities. The examinations include multiple choices, problem solving, and essay questions.

Assignments

Assignments are intended to enhance the concepts learned in the class and provide timely feedback of the learning process. Most of the assignments will be completed by groups and class time will be given to work on the exercises; however, outside class time is required to complete the tasks. It is every student's responsibility to contribute to the assignment and to complete the tasks in a timely manner. Most of the assignments require access to online materials and information. In most of the cases, only one assignment needs to be submitted by one group and the same grade will be assigned to all the group members. Contents from the group exercises will be reflected in quizzes and exams and students' performance may very depend on how well they learned from the assignments.

Paper

A well written research paper on an assigned topic is part of the course requirement. Progress in research as well as the results will be shared with the class throughout the quarter and will be part of the paper grade. Detailed requirements of the paper will be posted and discussed in the class.

Grading

Assignments 30%, paper 20%, quizzes 10%, midterm 20%, final exam 20%. Grades will be assigned based on the total percentage: A: $\geq 90\%$ B: 80-89% C: 70-79% D: 60-69%. Pluses and minuses will be given accordingly. The class will not be curved.

Course Policy

No make-up examinations will be set unless special arrangements have been made BEFORE the examination. Excusable late assignments should be prearranged. Late assignments that are not prearranged will be accepted with deduction of points. Cheating and plagiarism will not be tolerated. Refer to current University Catalog <http://www.csupomona.edu/~academic/catalog/> about university policies regarding cheating, plagiarism and other serious academic offenses.

Internet, Blackboard 9, E-Mail and Accessibility

Please **e-mail** me from your **Cal Poly E-mail** and always **put "GEO303" in subject field**. Most of the class materials are posted in **Blackboard 9 (pilot)**. If you are new to blackboard, please go through the blackboard information posted at <http://www.csupomona.edu/~ehelp/blackboard/index.html>. It is crucial that you have proper access to the **internet** for this class. If you do not have internet access in your home, you can use computer facilities on campus. Open computer labs are located in the University Library, in Building 98 (the CLA building), and in many other campus locations. Bring a laptop to the class would help; however, it is not required. If you need assistance with any of these "e" issues, you can start with the e-help web site <http://www.csupomona.edu/~ehelp/computinglabs/index.shtml> and contact e-help (the site has the contact info) if you need further assistance.

If you need any special accommodations due to disability or other situations, please discuss with me during the first week of the quarter.