

Geography 364 – Spring 2007
Geography of World Ecosystems
(<http://www.csun.edu/~sd1229/>)

Instructor: Dr. Shawna Dark

Email/Phone: shawna.dark@csun.edu / (818) 677 - 3530

Office Location: 130P Sierra Hall **Office Hours:** T 3:30-4:30 or by appointment

Introduction:

This course provides an introduction to the field of biogeography. Biogeography is one of the most exciting subdisciplines of the natural sciences that bridges the fields of geography and biology. In this course, we will explore the past, present, and future distributions of animals, plants, and other organisms in lecture and through field trips in our local natural communities. Because the patterns and processes that govern the distribution of species and habitats around the world are increasingly affected by human activity, this course will emphasize issues related to conservation of our natural environment. By the end of this course, each of you will have a working knowledge of biogeography that will broaden your scope of knowledge within the discipline of geography. In addition, I hope you'll gain a better understanding and appreciation of the environment in which we live.

Required Text:

Biogeography: Introduction to Space, Time, and Life by Glen MacDonald, 2003.

Wildflowers of the Santa Monica Mountains by Milt McAuley (If you have other field guides, you can use them instead of this text)

Course Webpage:

http://www.csun.edu/~sd1229/364/364_home.htm . Please check the course webpage on a regular basis. Study guides and lecture notes will be posted along with important announcements!

Course Goals and Objectives:

My goals for this course are 1) to familiarize you with the field of biogeography and how it relates to the discipline of geography, 2) to provide you with basic skills in plant and animal identification, vegetation sampling, the use of Global Positioning Systems (GPS), and other basic field techniques, and 3) to explore the use of GIS in applied biogeography via exercises in mapping of basic wetland and vegetation communities. Ultimately, I hope you will leave this class with a theoretical background in biogeography and with skills that will help you find a fabulous environmental job!

Evaluation:

Students will be evaluated via midterm exams (short-answer and multiple choice), lab assignments, and a written project (to be discussed in detail as the time approaches). The tentative breakdown of how you will be graded is as follows:

Midterm Exam 1	35%
Midterm Exam 2	35%
Lab Work	20%
Final Project	15%

The lab for this class is scheduled for Thursday from 2-3:15 pm. We will meet during this time either for lab or exams, although not every week. The schedule will change throughout the semester so keep up with our course web page. More on this later!

Lab Assignments:

After each lab, you will have a written assignment. Usually for labs we will go on field trips, if you cannot attend the field trip and have a good excuse for not going, then I will give you an alternative assignment.

All assignments for this class must be turned in during class. **DO NOT TURN IN ASSIGNMENTS VIA EMAIL.** Invariably, assignments that get turned in via email get lost in the shuffle.

Final Project:

For your final project, you will prepare a report outlining the biogeography of any living organism. I will give you a more detailed written assignment at a later date during the semester.

Other:

Attendance is not mandatory for the lecture portion of this course. However, be aware that those that do not come to lecture will most likely fail the course. Attendance to at least 3 of the field trips is mandatory. Assignments will be given for each field trip and everyone (even if you don't attend lab) is required to complete the assignment.

Please note, under no circumstances should you consider any form of cheating or plagiarizing in this course. If you are caught you will be given a failing grade for the course and you will be reported to the Dean of Social and Behavioral Sciences.

This schedule is **TENTATIVE**, meaning it is subject to change. Please be sure to attend class to keep on any scheduling changes.

TENTATIVE COURSE SCHEDULE

Week	Date	Topic	Reading
1	1/30	Introduction to Course	Chapter 1
	2/1	<i>Lab Basics, Field Trip Logistics</i>	-
2	2/6	Biogeography of Santa Cruz Island	Chapter 2
	2/8	<i>Lecture Catch Up!</i>	Chapter 2
3	2/13	Introduction to Biogeography	Chapter 2
	2/15	Guest Lecture on Biomes	Chapter 6
4	2/20	Physical and Biological Controls on Life	Chapters 3 & 4
	2/22	<i>Basic Plant and Animal Identification</i>	-
5	2/27	Disturbance	Chapter 5
	3/1	<i>CSUN Botanical Gardens Biomes of the World – Internet Assignment</i>	-
6	3/6	Continental Drift and Climate Change	Chapter 7
	3/8	<i>Plant Identification Field Trip (Lab #2)</i>	-
7	3/13	Exam #1	Chpts 1-7
	3/15	<i>Finish Lab #2</i>	-
8	3/20	Dispersal, Colonization, and Invasion	Chapter 8
	3/22	<i>Invasion Lab (Lab #3)</i>	-
9	3/27	Evolution, Speciation, and Extinction	Chapter 9
	3/29	<i>Finish Lab #3</i>	-
10	4/2-4/6	SPRING BREAK	
11	4/10	Biogeography and Human Evolution	Chapter 11, 12
	4/12	<i>Wetlands Mapping - GIS Lab</i>	-
12	4/17	Description & Interpretation of Biogeographic Distributions	Chapter 13
	4/21	<i>Field Trip to Santa Cruz Island (4/21)</i>	-
13	4/24	Biodiversity and Island Biogeography	Chapter 14
	4/26	<i>Work on Projects</i>	-
14	5/1	Guest Lecture	-
	5/3	<i>Work on Projects</i>	-
15	5/8	Human Evolution	Chapter 13
	5/10	<i>Project Presentations</i>	-
16	5/15	Biogeography and Conservation <i>Project Presentations(if needed)</i>	Chapter 15
	5/17	<i>Project Presentations</i>	-
17	5/22	Final Exam, Tuesday, May 22, 3-5pm	-

Intended Outcomes:

In accordance with proven teaching practices, the intended outcomes for this course will be made transparent to students at the beginning of the semester. These outcomes represent the knowledge and skill sets that you are expected to demonstrate upon successful completion of this course. The assessment tools used to indicate your mastery of these skill sets are listed below each learning outcome.

Goal A: Building a Knowledge Base

Students in this course will identify and define key terms and concepts central to the field of biogeography. Students will be able to define and explain key terms such as biodiversity, ecosystem, evolution, speciation, and colonization.

Assessment/Evaluation tool: Exam Questions, Field Exercises, and Lab Assignments.

Students will be able to identify the global distribution of biodiversity on a map in addition to associated physical and human related features.

Assessment/Evaluation tool: Map Assignments and Exam Questions

Students will be able to recognize, list and describe key ideas, facts and spatial conditions in the following categories: biodiversity, solar insolation, productivity, biomass, and anthropogenic disturbance.

Assessment/Evaluation tool: Exam Questions, Field Exercises, Lab Assignments

Students will be able to identify the biotic community in which they live including species of plants and animals and their associated distribution.

Assessment/Evaluation tool: Exam Questions, Field Exercises, Lab Assignments

Goal B: Acquiring Knowledge

Students will develop skills for acquiring new knowledge.

Students will demonstrate an ability to use effectively standard academic tools, such as academic journals, government documents, maps, and other textual media.

Assessment/Evaluation tool: Map Assignments, Field Exercises, and Lab Assignments

Students will demonstrate their ability to interpret non-textual (graphical and map) information of the biogeographical landscape.

Assessment/Evaluation tool: Exam Questions, Field Exercises, and Lab Assignments

Students will demonstrate their ability to understand patterns in the biotic world in which they live.

Assessment/Evaluation tool: Critical Assessment Papers, Exam Questions, Field Observations, and Lab Assignments

Goal C: Problem Solving Skills

Students will demonstrate their problem solving skills.

Students will analyze non-textual illustrations of the biotic community and from maps, graphics, etc.

Assessment/Evaluation tool: Map Assignments, Field Exercises, and Lab Assignments

Students will apply facts on the distribution of biodiversity from one (or multiple) places in the course of analyzing and evaluating conditions and processes common or unique to other places.

Assessment/Evaluation tool: World Ecosystems Map Lab Assignment, Critical Assessment Papers

Students will demonstrate their ability to formulate a research question, a hypothesis regarding the research questions and methods of testing the hypothesis.

Assessment/Evaluation tool: Final Biogeography Project, Field Observations, and Lab Assignments.

Goal D: Communicating Knowledge

Students in this course will be able to communicate ideas effectively. They will demonstrate basic communicative competency with textual, cartographic, graphic, and numeric information.

Students will effectively communicate these ideas and opinions using textual communication.

Assessment/Evaluation tool: Critical Assessment Papers, Biogeographical Reports, and Essay Exam Questions

Students will construct one or more legible maps.

Assessment/Evaluation tool: Map Assignments, Lab Assignments, and Biogeographical Reports

Students will generate one or more graphical and statistical measure and use it to explain at least one map and/or field observations.

Assessment/Evaluation tool: Map Assignments, Lab Assignments, and Biogeographical Reports