

Principles of Ecology

Biology 313

Dr. Jon Stern

HH 217

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“Ecology is Not Rocket Science, Rocket Science is Easy”
--Anon

OUTLINE AND OBJECTIVES OF THE COURSE

The world is a complex place with chemistry, physics and geology interacting with biological entities to make a pretty interesting little planet I like to call “Home”. Organisms interact with each other and their world. These interactions define how the biosphere works. Humans influence and are influenced by these interactions, and how they go, so do we. Ecology is the study of abundance, distribution of organisms, and how they interact with one another and the environment.

In this class we will discuss concepts of Ecological Theory from the perspective of individuals, populations, communities and ecosystems. Within this context we will be discussing things like: competition, predator/prey interactions, co-evolution, parasite-host interactions, biogeochemical cycles and food webs. Examples will be drawn from Marine, Aquatic and Terrestrial Ecosystems. Throughout the course we will discuss on Climate Change. The media is awash in stories about Global Warming, but actual impacts are rarely discussed mostly because they are generally poorly understood. Even its existence is debated though it is fairly obvious to most people that the world is changing.

The overall goal of this class is to help make you ecologically literate. Are whales out-competing humans for fish? What will an average rise in temperature of 3-7 °C mean to me and my beachfront condo in Ft. Lauderdale? So what if there are only 100 condors left in the world? Have humans exceeded their carrying capacity on earth? How much CO₂ can the oceans absorb, and why is this a big deal? These are they types of questions I hope you will be able to discuss.

GRADING AND STUFF

The semester course is jam-packed into 5 action-packed weeks.

Your grade will be based on 500 total possible points. 300 points are based upon the results of one 150 point mid-term and one 150 point final. The mid-term is a basic test of your understanding of the information presented in class. The final will be

comprehensive, and a group effort. Your group will select a “problem”, and research it. You will then get a custom-built final exam. This final will be open “book”, open note, open mind. The mid-term is NOT “open”.

Laboratory will consist of exercises requiring in-class and homework assignments. There will be 200 points possible from these exercises.

Class participation (comments, questions and all that) is totally welcome and encouraged!!! The plan is to learn about the world and have some fun doing so.

Assignment of Grades will follow the standard 90% and above = A; 80-89% = B; 70-79% = C; 60-69% = D; anything below a 60% = F.

DATES OF INTEREST

June 11	First Day of Class
June 29	Exam 1
July 4	July 4 (duh)
July 12	Final Exam
July 13	Last Day of Class; Final Exam Presentations