

Spring 2016

# BIOL 216--Ecology

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## Ecology, Biology 216

The primary emphasis in Ecology is on efforts to explain and predict the distribution and abundance of organisms, how ecological communities are composed, and why they vary in time and space. Recommended course background: one or more courses from organismal biology group and one college-level math course. Offered every year.

### Text:

Stiling, P. 2015. Ecology: Global Insights and Investigations McGraw-Hill Higher Education

### Tentative schedule:

	<i>Dates</i>	<i>Readings</i>
I. Introduction. The scope and nature of ecology	1/19, 21	3-20
II. Basic evolutionary principles, and implications for conservation biology	1/21-28	Evolution in island populations (link in Moodlepage) 24-43, 47-74
III. Distributions of organisms-- patterns and limitations	2/2-2/9	102-122, 124-139, 142-157
IV. Populations		
Methods of analysis; single-population descriptions	2/11-25	158-175, 178-193, 194-218
Conservation biology		
	3/1	
V. Species interactions, overview		
Competition	3 /15-22	222-242
Predation	3/24,26	264-283
Herbivory and mutualism	3/31, 4/5	284-300, 244-262
Disease and Parasitism	4/7-12	303-318
Overview of regulatory mechanisms,	4/14	320-335
Population management	4/19	277-281
VI. Communities and Ecosystems		
Properties, patterns, change	4/19	357-374, 434-465, 414-430
Biodiversity	4/19,21	377-396 390-409
Ecosystem processes and properties; landscapes	4/21	518-534 538-559
Ecosystem processes-- nutrients	4/21	562-578
Review, exam preparation		