

Population & Community Ecology (Bio. 142) Fall 2007 Syllabus

Class	Date	Topic/Assignment due	Text Chap.
1. POPULATION ECOLOGY			
1	W 9/5	Course overview, demography	4
2	M 9/10	Demography & Population growth	4,5
3	W 9/12	Population growth, cont'd., patch dynamics, metapopulations	6, 7, 14
4	M 9/17	Life history evolution	4
5	W 9/19	Harvesting	7, 14, 15
6	M 9/24	Work session on demography reports	
7	W 9/26	Demography reports	
2. SPECIES INTERACTIONS			
8	M 10/1	Predator-prey—patterns & models	9,10
9	W 10/3	Predator-prey—experiments	9,10
	M 10/8	—Univ holiday—no class	
10	T 10/9	Herbivory, parasitism & coevolution	12
11	W 10/10	Competition—patterns & models	5, 8
12	M 10/15	Competition—models & experiments (Lit Rpt. 1)*	5, 8
13	W 10/17	Competition—finish	5,8
14	M 10/22	Mutualism	13
15	W 10/24	Mid-term exam in class	
3. COMMUNITY ECOLOGY			
16	M 10/29	Climates on a rotating earth, primary production	2,3
17	W 10/31	Adaptations to “extreme” environments (Lit. Rpt. 2)	2
18	M 11/5	Energy flow, food webs, mutualisms (Lit. Rpt. 3)	[11], 17, 20
19	W 11/7	Biogeochemistry, global climate change	18
	M 11/12	—Univ. holiday—no class	
20	W 11/14	Biogeochemistry, cont'd. (Lit. Rpt. 4)	17, 18
21	M 11/19	Biogeochemistry, cont'd. (Lit. Rpt. 5)	11, 18
	W, R, F	Thanksgiving break no class	
22	M 11/26	Abundance & diversity of species in community	19, 20, 21
23	W 11/28	Island biogeography & community processes (Lit. Rpt. 6)	16, 21, 22
24	M 12/3	Island biogeography & community processes	16, 21, 22
25	W 12/5	Exotic & endangered species in Hawaii	7
26	M 12/10	Take home final available, course evaluation	
	R 12/15	4:00pm, Take-home final exam due , Dana 120	

*each student works on only one Lit. Rpt. topic

General Course Information

Dr. Francie Chew, 617-627-3189, Barnum 107 (Biology) Email: fchew@tufts.edu

Office hours: Monday and Tuesday 130-230pm and, of course, by appointment

Class meetings: Barnum 114, MW 10:30-11:45

Course description: Introduction to population dynamics, species interactions and community structure. Topics include population structure and growth, predator-prey interactions, competition and mutualism, adaptations to the physical environment, patterns and processes governing the world's biomes.

Prerequisites: Biology 13 & 14 or equivalent or instructor's permission.

Text: *Ecology, from Individuals to Ecosystems 4th ed. (2006)*, M. Begon, C.R. Townsend, J.L. Harper, Blackwell, Malden, MA.

Blackboard website: <http://blackboard.tufts.edu/>, after you login, go to Biology 142

Course assignments & grading:

Demography presentation	15%
Literature Report	15%
Literature discussion paper	15%
Mid-term exam	20%
Take-home final exam	30%
Class attendance & participation	5%

Demography presentation: These small-group projects focus on applying a demographic simulation model (population ecology software), to a case of your choice, presenting the case and simulation to the class (7-9 minutes), and writing a group summary of the case (~750 words). More instructions coming.

Literature reports: Small-group work to interpret papers from current literature in a 12-14 minute group presentation. More instructions coming on this and the discussion paper.

Literature discussion papers: An individual discussion paper on one aspect of your group's literature report and any background context from lecture or the text (~750-1000 words).