

Population & Community Ecology (Bio. 142)
Fall 2011 Schedule

Class	Date	Topic/Assignment due	Text Chapt.
1. POPULATION ECOLOGY			
1	W 9/7	Course overview, demography	1, 8
2	M 9/12	Demography & population growth	8, 9
3	W 9/14	Population growth, metapopulations	9, 14, 16, 17
4	M 9/19	Harvesting	3, 14, 15
5	W 9/21	Life history evolution	2, 8, 10
6	M 9/26	Open work session on demography reports	
7	W 9/28	Demography reports	
2. SPECIES INTERACTIONS			
8	M 10/3	Predator-prey—patterns & models	9, 11
9	W 10/5	Predator-prey—experiments	11, 16
	M 10/10	University Holiday [Columbus Day] —no class	
10	W 10/12	Herbivory, parasitism, coevolution (Lit. Rpt. 1)	12, 13
11	M 10/17	Competition—patterns & models	5, 10
12	W 10/19	Competition—models & experiments (Lit. Rpt. 2)	9, 10
13	M 10/24	Competition—models & experiments, cont'd. (Lit. Rpt. 3)	9, 10
14	W 10/26	Competition—evolutionary aspects	5, 10
15	M 10/31	Mutualism	12
16	W 11/2	Mid-term exam	
3. COMMUNITY ECOLOGY			
17	M 11/7	Climates on a rotating earth, primary production	6, 22
18	W 11/9	Energy flow, food webs, mutualisms (Lit. Rpt. 4)	20, 23
19	M 11/14	Biogeochemistry & alternative stable states (Lit. Rpt. 5)	24
20	W 11/16	Biogeochemistry, global climate change	25
21	M 11/21	Abundance & diversity of species (Lit. Rpt. 6)	19, 21
	[W 11/23]	University Holiday [Thanksgiving break]—no class	
22	M 11/28	Abundance & diversity, cont'd.	
23	W 11/30	Island biogeography & community processes	5, 17, 18
24	M 12/5	Exotic & endangered species in Hawaii	17
25	W 12/7	Community processes, resilience	18
26	M 12/12	Take-home final, course evaluations	
	F 12/16	Take home final exam due, 4:30pm, Dana 120 or via email	

Course Information

Dr. Francie Chew, 617-627-3189, Barnum 107 (Biology)

Email: fc Chew@tufts.edu

Office hours: Tuesdays 1:30-3:30pm and by appointment

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

Course description: Introduction to population dynamics, species interactions, and community structure. Topics include demography and population 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:

-Krebs, C.J. 2009. *Ecology, the experimental analysis of distribution and abundance*, 6th edition. Cummings, Boston.

TRUNK website: <https://trunk.tufts.edu> Search for BIO and find the listing BIO-0142

Course assignments & grading:

Demography presentation + written report 15%

Literature Report 15%

Literature discussion paper 20%

Mid-term exam 15%

Take-home final exam 30%

Class attendance & participation 5%

Demography presentation: Small-group projects to focus on applying a demographic simulation model 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 (~750-1000 words). More instructions coming.

Literature reports: Small-group work to interpret papers from current literature in a 14-16 minute group presentation to the class. More instructions coming on this and the discussion paper.

Literature discussion papers: An individual discussion paper focused on one new experimental data paper in the context of one aspect of your group's literature report and any background context from lecture or the text (~1000-1300 words).