

Restoration Ecology
11:216:488 (4cr)
Spring Semester
MTu 10:55-12:15, Lab M 1-5
Dr. Myla Aronson (mfjohnso@rci.rutgers.edu)

Study of the ecological processes that underlie the re-creation of a natural community. Habitat characteristics, life histories, reproductive ecology, biological invasions, mutualism, societal laws, and attitudes toward restoration. Field trips to representative restored habitats.

Learning goals:

- 1: Explain basic population, community ecology, and ecosystem-level concepts.
- 2: Create a natural resource management plan demonstrating an understanding of societal values and interests.
- 3: Think critically and solve problems using evidence-based reasoning.
- 4: Communicate effectively orally and through written text and graphics.
- 5: Evaluate ecology, evolution and natural resource management concepts in a global context.

Revised Schedule of Classes

	Lecture	Lab
Jan. 20	Introduction: what is biodiversity?	
Jan. 26		
Jan. 27		
Feb. 2	Functions of restoration	Defining the target community
Feb. 3	Initiating populations	
Feb. 9	Rare species	Restoration Film Festival
Feb. 10	Too common species	
Feb. 16	Ecotypes	Pinelands Nursery, Columbus, NJ
Feb. 17	Restoration genetics	
Feb. 23	Landscape ecology; metapopulations	EPA case studies – Harry Compton
Feb. 24	Study day	
Mar. 2	EXAM 1	Great Falls National Historical Park, NJ
Mar. 3	Community assembly	
Mar. 9	Finding mutualists	Duke Farms, Hillsborough, NJ
Mar. 10	Managing ecological succession	
Mar. 16-17		
Mar. 23	Antagonists: herbivory and biological control	
Mar. 24	Disturbances: wanted and unwanted	
Mar. 30	Restoring hydrology	
Mar. 31	EXAM 2	
Apr. 6	<u>EARLY TRIP:</u> New Jersey Meadowlands	New Jersey Meadowlands
Apr. 7	Restoring invertebrate habitats	
Apr. 13	<u>EARLY TRIP:</u> Prospect Park, Brooklyn, NY	Prospect Park, Brooklyn, NY
Apr. 14	Urban biodiversity issues	

Apr. 20	<u>EARLY TRIP:</u> Pennypack Ecological Restoration Preserve, PA	Pennypack Ecological Restoration Preserve, PA
Apr. 21	Project planning and monitoring	
Apr. 27	Class Project presentations <u>Lab:</u> presentations continued	
Apr. 28	Case studies: Sea level rise and "restoring the future"	
May 4	<u>EARLY TRIP:</u> Meadow restorations, Monmouth County Parks, NJ	Meadow restorations, Monmouth County Parks, NJ
May 9	FINAL EXAM, 9 – 11 a.m.	