

# Forest Ecology

## ESP 413

### Sample Syllabi

**Instructor:** Dr. Samantha Langley-Turnbaugh, 106A Bailey Hall, Phone: 780-5361;  
email: langley@usm.maine.edu

**Texts:** Kimmins, J.P. 2004. Forest Ecology, 3<sup>rd</sup> edition.

Maine Forest Service. 1995. Forest Trees of Maine, 12<sup>th</sup> edition

Maine Forest Service. 2004. Best Management Practices for Forestry: Protecting Maine's Water Quality

Other species identification guides (at the discretion of the student), and a write in the rain field notebook

**Philosophy:** The objectives of this course are (1) to understand the need for forest ecology as the foundation of forest management; (2) to understand what constitutes a healthy forest ecosystem and a **sustainable** forest environment; and (3) to gain practical experience in collecting field data from forest ecosystems and presenting the data in an appropriate and user oriented format. This course should provide you with an understanding of the function, spatial variability and evolution of forest ecosystems. In addition, it will provide you with some basic field experience, and the opportunity to work with a landowner to generate an ecosystem based forest management plan.

#### Lecture Schedule (subject to change)

<b>Date</b>	<b>Topic</b>	<b>Chapters</b>	<b>Tree</b>
Aug. 30	Forestry stats, background, development of forestry & forest ecology	1, 2	Pines
Sept. 1	Energy transfer in forest ecosystems	4	B. Fir
6	No class – Labor Day		
8	Energy transfer & Biogeochemical cycling	5	Spruces
13	No class – conference		Cedars
15	No class – conference		
<b>18</b>	<b>Homecoming – extra credit available</b>		
20	Biogeochemical cycling	5	E. Larch
22	Genetics & Reproduction	16,	
27	Population and community ecology (field trip?)	14, 15	
29	<b>Exam 1 – Forest biology</b>		
Oct. 4	Climate (field trip?)	8	Birches
6	Light	7	
11	No class – October break		
13	Soils and landforms	11	Ashes
18	Wind	9	Hemlock
20	Water	10	
25	Fire	12	Maples
27	Site Quality		

Nov	1	<b>EXAM 2 - Site factors</b>	
	3	Reading the Forested Landscape – R. Sanford	
	8	Forest Management	19 Poplars
		Lab – Field trip to Lavalley Lumber mill – leave at 12:30pm	
	10	Forest Management	22, 23
	15	Forest Management	Oaks
	17	Forest Management	
	22	Finish data reduction/distribute	
	24	No class – Thanksgiving Break	
	29	Forest Certification	Beech
Dec.	1	Disturbance and succession	17, 18
	6	Disturbance and succession /Forest communities	Invasives
	8	Review	
	15	<b>FINAL EXAM</b>	(10:45-12:45)