Fall 9-1-2000

FOR 532.01: Forest Ecosystem Processes

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FOREST ECOSYSTEM PROCESSES (FOR 532)

Fall 2000

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SC 428, Phone: 243-6311, 4632

Text: Forest Ecosystems: Analysis at Multiple Scales (1998), by R.H.Waring and S.W.Running

CLASS SESSION	CHAPTER	PAGES	TOPIC
1	1		Ecosystem analysis principles
2	1		Space/Time scaling principles
3	Demonstration, FOREST-BGC Ecosystem model		
	Ecosystem Analysis Principles		
4	2		Tree water relations
5	2		Hydrologic processes
6	3		Photosynthesis
7	3		Respiration
8	3		Net primary production
9	3		Decomposition
10	4		Nutrient inputs-outputs
11	4		Internal nutrient cycling
12	5		Stand development
13	5		Forest succession
14	6		Biotic ecosystem disturbances
15	6		*Abiotic ecosystem disturbances*
	Regional Scaling Principles		
16	7		Remote sensing principles
17	7		*Topographic/soils analysis*
18			Climate principles,MT-CLIM model
19	7		Landcover change analysis
20	7		Landscape pattern analysis
21	8		Regional biology
22	8		Forest-atmosphere interactions
23	8		Regional biogeochemistry
24	9		Global forest distribution
25	9		Global carbon cycle
26	9		Biodiversity and sustainability
27-Final	Present class projects, models		

CLASSWORK RESPONSIBILITIES (this is what your grade is based on)

1] a copy of our new multi-biome BIOME-BGC ecosystem model and MT-CLIM mountain micro-climate model, will be furnished to you. We will do exercises with them on PCs and bring the graphed results to class for discussion throughout the semester.

2] To develop your own skills in systems analysis, I want each student to try a first conceptual layout of an ecosystem analysis problem of their choice, with logic flowchart, key cause-effect linkages and references. This class project will be the basis for our "final" , as each student will present their project to the class verbally, and in written form to me.