

NRM 470 – Terrestrial Carbon Management Spring 2016

Instructor - John Yarie

Lectures - MWF 9:15-10:15 (305 O'Neill Bldg)

Office Hrs - 337 O'Neill, 8A – 11A MTWT.

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Textbook and additional reading material :

Wackernagel, Mathis and William Rees. 1996. Our Ecological Footprint. New Society Publishers, British Columbia, Canada. 160 pgs.

Walker, Brian and David Salt. 2006. Resilience thinking: sustaining Ecosystems and People in a Changing World. Island Press. Washington, D.C. 174 pgs.

Ravindranath, N. H. and Madelene Ostwald. 2008. Carbon Inventory Methods;

periodically. Students are responsible for all information covered in lectures, reading assignments, and discussions.

A planning exercise will be assigned as part of the course work and will be

<u>Lecture #</u>	<u>Topic</u>	
5	Project Development, etc.	
6	Methodological Issues – Baseline, Permanence, Additionality and Leakage	
7	Carbon Inventory Baseline and Project Directions	
8	Project Areas and Boundary	
9	Methods Overview	
10	Introduction to Class Project	
11	Carbon Pools and Measurement Frequency	
12	Class project discussion	
13	First Exam	
14	Generic Methods of Inventory	ChaptT 0 -0 0 12 372.96 373.56

<u>Lecture #</u>	<u>Topic</u>	<u>Assignment</u>
21	Deadwood and Litter	Chapter 11 – Carbon Inventory Methods; Chapters 6 & 7 – Field Measurements
22	Soil Organic Carbon	Chapter 13 – Carbon Inventory Methods; Chapter 10 – Field Measurements
23	Discussion period	
24	Litter Decomposition	Chapter 8 – Field Measurements
25	Deadwood Decomposition	Chapter 9 – Field Measurements
26	Soil Respiration	Chapter 11 – Field Measurements
27	Dissolved Organic Carbon	Chapter 13 – Field Measurements
28	Methane Fluxes	Chapter 12 – Field Measurements
29	Discussion period	
30	Remote Sensing and GIS	Chapter 14 – Carbon Inventory Methods; Chapter 16 – Field Measurements
31	Modeling Carbon Dynamics – Online carbon balance software; COLE, COMET-VR, CENTURY	Chapter 15 – Carbon Inventory Methods
32	National Carbon Inventory	Chapter 16 – Carbon Inventory Methods
33	National Carbon Inventory	Chapter 16 – Carbon Inventory Methods
34	Carbon Stock Estimation and Changes	Chapter 17 – Carbon Inventory Methods
35	Discussion	
36	Uncertainty Estimation, Quality Assurance	Chapter 18 – Carbon Inventory Methods

<u>Lecture #</u>	<u>Topic</u>	<u>Assignment</u>
37	Landscape-Scale Carbon Sampling	Chapter 17 Field Measurements
38	1605(b) guidelines	
39	Carbon Markets – Do we need financial or ecological expertise?	
40	Project Discussion	

draft before final submission for a grade. Written assignments may be emailed or turned in during class to the instructor.

9. Plagiarism : Plagiarism is using what another person has written, and using it as your own words and thoughts. Plagiarism is never acceptable. According to the University, plagiarism is preventable by students “not representing the work of others as their own. A student will attribute the source of information not original with himself or herself (direct quotes or paraphrases) in compositions, theses and other reports.”

Attendance

Disabilities Services

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The staff of Disability Services works with faculty in arranging appropriate services in the classroom. Questions should be directed to the Director of Disability Services at (907)-474-5655.

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