



Natural Resources in a Changing Climate FOR 6934 – SPRING 2014

NAT RES/CLIM CHANGE (title in Registrar's Schedule of Courses)

Gainesville Campus Students – 2 options

Classroom: FOR 6934 Section 1463 – Class Meets M/4 and T/2-3 in NZH 222

GNV students for WEB delivery: FOR 6934 Section 147G

Students at a REC or in an online degree program - Contact Rhiannon Pollard for the appropriate section and registration.

Instructor

Dr. Daniel McLaughlin
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Office Hours: T 3-5 pm

Course Objectives

This course takes a multidisciplinary and systems approach to address potential global climate change (GCC) effects to our natural resources and understand how adaptive strategies may sustain these resources in a changing climate. The course builds upon the three thrusts of the School of Forest Resources and Conservation (geomatics, forest resources, and fisheries and aquatic sciences), and focuses on the following objectives (see schedule for specific topics):

- Understand the mechanisms and broad implications of GCC.
- Explore how resource-based land use planning may best mitigate for sea level rise.
- Assess forest management and conservation strategies for adapting to and mitigating GCC.
- Address the major GCC issues facing water and aquatic resources.
- Evaluate current fisheries and their future sustainability with GCC.

- Examine natural resource policies that focus on adapting to and/or mitigating GCC.

Facilitation of Interactive Learning

Lectures: classroom and asynchronous online.

Discussion Sessions: asynchronous with online and campus students via Sakai.

Dissemination of Student Assignments: succinct documents (e.g., posters, extension fact sheets, commentaries) publicly posted on Sakai; students are required to review and critique others' submissions (see peer-review assignments below).

Guest Lectures: Multiple lectures from GCC and natural resources experts across campus.

Course Materials

Peer-reviewed literature, technical reports, interactive websites, and outreach documents. Sakai will be used for posting all course materials (<http://lss.at.ufl.edu>).

Assignments

Research Extension Documents:

Extension documents directed towards natural resource managers and stakeholders that convey issues and management strategies relevant to the audience's interests and GCC. Potential target audiences include: coastal community planners, public land management agencies, forest industry, private forest landowners, fisherman, and aquaculture industry.

Deliverables: Two 1-2 page extension fact sheets, each of which targets a different audience and issue related to GCC (see below for format).

Synthesis of Peer-reviewed Literature:

Synthesis of multiple peer-reviewed articles that are focused on a specific effect of GCC scenarios. Example topics include: 1) sea level rise and coastal systems, 2) tree species range shifts, 3) vulnerability of inland wetlands to GCC, 4) salt water intrusion effects to riparian forests, and 5) sea level rise and coastal aquaculture.

Deliverables: A conference- or outreach-style poster (see below for format).

Evaluation of a Natural Resource Policy:

Identification, critique, and refinement of a policy that is either specifically focused on or relevant to natural resources and GCC. Policies to consider include but are not limited to: 1) wetland mitigation, 2) water supply planning, 3) carbon credit banking, 4) coastal development policies, and 5) land use planning policies.

Deliverables: A journal-style commentary (see below for format).

Peer-reviews of Colleagues' Deliverables:

Peer-reviews that provide constructive critiques.

Deliverables: Three reviews (~1-2 pages each) highlighting strengths and shortcomings of others' submitted assignments, one for each of the above assignments.

Class Discussion Involvement:

This is a continuous, semester long assignment. Ask questions and be an active participant in class discussions; learning is more than passive accumulation of information. There will be multiple asynchronous discussion sections throughout the semester; you are required to participate in at least three of these.

Descriptions of Assignment Formats

Extension Fact Sheet Format

Fact sheets are short (1-2 pages) problem-focused documents that simplify problems and solutions in a way to be easily understood and applied by the target audience. Clarity is critical; use bulleted lists, simple figures, and relevant photographs to convey your message. The language used should target the reading level of your audience and be personal (e.g., use the word 'you'). Examples will be presented in class, and reading materials relevant to potential target audiences and extension outreach will be provided.

Commentary Format

Journal-style comments are short, concise papers (~ 4-5 single-spaced pages). Comments critique and elaborate on published documents, and do not include typical introduction, methods, and results sections.

Poster Format

The purpose of a poster is disseminate information quickly and in the absence of any other communication. Therefore, it should be primarily visual information (e.g., figures, tables, and images) with limited text. The format should follow typical poster formats used in conference poster sessions or outreach platforms. Examples will be presented in class.

Evaluation and Grading

Assignments	85%
1. <i>Research Extension Documents (2)</i>	30%
2. <i>Evaluation of a Natural Resource Policy</i>	20%
3. <i>Synthesis of Peer-reviewed Literature</i>	20%
4. <i>Peer-reviews of Colleagues' Deliverables (3)</i>	15%
Class Discussion Involvement	15%

Grading Scale

A 94-100.0%	A- 90-93.9%	B+ 88-89.9%
B 84-87.9%	B- 80-83.9%	C+ 78-79.9%
C 74-77.9%	C- 70-73.9%	D+ 68-69.9%
D 64-67.9%	D- 60-63.9%	E <60.0%

SCHEDULE

Week	Topic	Guest Lectures ¹
1	Description of course assignments, submission formats, and online communication	
2	<i>Module 1: GCC Mechanisms and Implications</i> Historic evidence of GHGs, climate, and SLR	Jon Martin
3	<i>Module 1: GCC Mechanisms and Implications</i> Current/predicted SLR, climate, and ocean acidification	
4	<i>Module 2: GCC and Geomatics</i> Monitoring and predicting SLR (global vs. local)	Peter Adams
5	<i>Module 2: GCC and Geomatics; Poster Due</i> Resource-based planning and predicted SLR	Robert Swett
6	<i>Module 3: GCC and Forest Resources; Poster Peer-Review Due</i> Sustainable forestry	Jack Putz
7	<i>Module 3: GCC and Forest Resources;</i> Forestry for carbon sequestration and water yield	Tim Martin
8	<i>Module 3: GCC and Forest Resources</i> Forest restoration and biodiversity conservation	Leda Kobziar
9	<i>Module 4: GCC and Water Resources</i> Vulnerability of inland water bodies and aquatic habitats	Chris Martinez
10	<i>Module 4: GCC and Water Resources; Fact Sheets Due</i> Salt water intrusion effects to riparian systems	David Kaplan
11	<i>Module 5: GCC and Fisheries; Fact Sheet Peer-Review Due</i> Freshwater fisheries and aquaculture	Mike Allen

12	<i>Module 5: GCC and Fisheries</i> Estuarine and marine fisheries	Jennifer Seavey
13	<i>Module 6: GCC and Natural Resource Policy</i> Banking systems, from carbon to wetlands	Damian Adams
14	<i>Module 6: GCC and Natural Resource Policy</i> Land-use and conservation policies	
15	Course Overview; Commentary Due Commentary Peer-Review Due on Exam Day	

***Readings will be assigned and posted prior to relevant lectures.**

¹The list of guest lectures is tentative.

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see:

<http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>.

Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students.

Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/*

Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library
Training Programs
Community Provider Database

- *Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/*

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/