Coastal Systems
ENV 6932 – Spring 2015

Catalog Description: 3 credits. The ecology of coastal ecosystems and their response to global change.

Instructor: Dr. Christine Angelini
580A Weil Hall
c.angelini@ufl.edu
www.angeliniecologylab.com

Contact: **Class website (UF Canvas):** https://lss.at.ufl.edu
Course e-mail: Use Canvas for ALL correspondence
Office Hours: Wednesday 3-5pm, Weil 580A

Time and Location:
- M 7/8th period (1:55-3:50)
- W 7th period (1:55-2:45)

Course Objectives:
This course will introduce students to the physical and biological factors that regulate the structure and functioning of estuarine and coastal ecosystems, including salt marshes, mangroves, oyster reefs, coral reefs, sponge reefs, seagrass meadows, and intertidal mudflats. In addition, students will learn why global change is driving loss of these valuable ecosystems as well as what strategies are being utilized to limit further degradation. The course will be comprised of lectures, discussions of the primary literature, group exercises, and three field trips. Over the semester, students will learn how to discuss ecological concepts and theory, articulate testable research questions and hypotheses, build and manage a reference library, and create presentations for a broad audience. The course will culminate in

a group project in which the students will present their research on new technologies being developed to re-build degraded coastal ecosystems.

Course Supplies:

- Required Textbook: None
- Assignments, readings, and announcements will be posted on the course website, so it is important to *regularly check the class homepage* (https://lss.at.ufl.edu).

Course Expectations:

- Attend class and **arrive on time**.
- Complete assigned readings *prior to the class for which they are assigned*.
- Participate in class discussions, including your thoughts on the assigned readings and lecture subjects. Learning is more than passive accumulation of information, and we will be asking a lot of questions in class.

Grading Scale:

A (≥93), A- (≥90 & <93), B+ (≥87 & <90), B (≥83 & <87), B- (≥80 & <83), C+ (≥77 & <80), C (≥73 & <77), C- (≥70 & <73), D+ (≥67 & <70), D (≥63 & <67), D- (≥60 & <63), E (<60).

Grading Scheme and Assignments:

Class Participation	10%
Homework	60%
Final Group Project	30%
Total	100%

- **Participation**: You cannot receive an A in this course without actively participating. Earn your participation grade by consistently attending class, asking and answering questions, and offering your opinion on course topics and current events.
- **Homework**: There will be homework assignments designed to help students develop their own research questions, improve their writing skills, or reinforce their understanding of the material covered in the lectures and readings.
- **Independent Group Project**: The independent project is a half semester-long group (n=3) project. Each group will investigate a coastal environmental problem of their choice, research a technology or management strategy being developed to solve it, outline future improvements to that technology/ strategy, and deliver a 20 minute in-class presentation.

Field Trips:

Three field trips will be organized to visit coastal ecosystems. The first will be a half day field trip to visit salt marsh habitats at the GTM NERR, the second a 4-day day trip to visit mangrove, seagrass, and coral reef habitats in South Florida, and the third a half-day trip to visit oyster reefs in Cedar Key. Field trips may be scheduled on Mondays and Spring Break. Additional details will follow.

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, presentation). 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: https://catalog.ufl.edu/ugrad/current/advising/info/student-honor-code.aspx.

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, J. Wayne Reitz Union, 392-1601, www.crc.ufl.edu

Students with Disabilities Act:
The Dean of Students Office coordinates the needed accommodations of students with disabilities. This includes the registration of disabilities, academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation

services, and mediating faulty-student disability related issues. *Dean of Students Office*, 202 Peabody Hall, 392-7066, www.dso.ufl.edu.

Course Evaluations:

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open.

Course Topics and Schedule: This schedule is tentative and subject to change based on the timing of fieldtrips, guest lecturer schedules, student interests, and current events.

*Assigned readings are posted in the "Resources" section of the Canvas site. ***Complete assigned readings prior to the class for which they are assigned, so we can discuss them in class.***

Week	Date	Topic	Reading Assignment	Assignment	Due Date
1	1/7/15	Introduction to Coastal Systems	None	In Class Ex. 1	1/7/15
2	1/12/15	Salt Marshes I: Plant Community Organization	Levine et al. 1998; Pennings et al. 2003	HW 1	1/12/15
2	1/14/15	Salt Marshes II: Plant-Animal Interactions	Silliman & Bertness 2002; Griffin et al. 2012	HW 2	1/14/15
3	1/19/15	Salt Marshes III: Mechanisms of Recovery	Angelini & Silliman 2012; Writing Guides	Mendeley & MS word Plug in	NA
3	1/21/15	Salt Marshes IV: Historical & Future Ecology	Gedan et al. 2009; Bianchi et al. 2013	Intro. Para. + 10 citations	1/23/15
4	1/26/15	**TRIP TO GTM NERR**	No reading	None	NA
4	1/28/15	Workshop Introduction Paragraphs	No reading	Peer Review Intro. Para	1/28/015
5	2/4/15	Coral Reefs I: Ecology of Corals	Knowlton & Jackson chapter	Revise Intro. Para.	2/4/15
5	2/6/15	Coral Reefs II: Competition & Predation	Buss & Jackson 1979; Berkepile & Hay 2008	HW 3	2/6/15
6	2/9/15	Coral Reefs III: Conservation (Shrack)	Hughes 1994; Dixson et al. 2014	HW 4	2/9/15
6	2/11/15	Coral Reefs IV: Disease in the Keys (Shrack)	Raymundo et al. 2009	None	NA
7	2/16/15	Mangroves I: Spatial Ecology	Mangrove chapter; Sousa & Kennedy 2007	TBA	TBA
7	2/18/15	Sponge Reefs: D Behringer	Wulff 1997; Loh & Pawlik 2014	TBA	TBA
8	2/23/15	Mangroves II: Nursery Functioning	Beck et al. 2006	Prepare for Keys trip	NA
8	2/25/15	Mangroves III: Anthropogenic Impacts	Valiela et al. 2001	TBA	TBA
9	2/26- 3/2/2	**TRIP TO EVERGLADES**	Childers et al. 2006; Davis et al. 2005; Boucek and Rehage 2013; Evans et al. 2006		
10	3/9/15	Oysters I: Functions & Services	Orth et al. 2006	TBA	TBA
10	3/11/15	Oysters II: Acoustic Ecology	Lillis et al 2013	TBA	TBA
11	3/16/15	**TRIP TO CEDAR KEY**	No reading	TBA	TBA
11	3/18/15	Attend Chris Craft Wetlands Seminar	Craft et al. 2008	TBA	TBA
12	3/23/15	Oysters III: Climate & Disease	Fourqurean & Robblee 1999	TBA	TBA
12	3/25/15	Seagrass I:Meadow structure & function	Seagrass chapter; van der Heide et al. 2012	TBA	TBA
13	3/30/15	Seagrasses II: Micro & macro consumers	Duffy et al. 2003, Hughes et al. 2014	TBA	TBA
13	4/1/15	Seagrasses III: Water Quality Issues in FL	Tom Frazer guest lecture; TBA	TBA	TBA
14	4/6/15	Intertidal Mudflats: Structure & function	Byers et al. 2011; van der Heide et al. 2012	TBA	TBA
14	4/8/15	Work on projects in class	No reading	TBA	TBA
15	4/13/15	Work on projects in class	No reading	TBA	TBA
15	4/15/15	Work on Projects: Meet in classroom	No reading	TBA	TBA
16	4/20/15	Group Project Presentations	No reading	TBA	TBA
16	4/22/15	Wrap up class	No reading	TBA	TBA