

PCB 4353 – Florida Natural History
aka "Florida Ecology, Natural History, and Conservation"
Fall 2015, 3 credits

Instructor: Dr. Gregg Klowden (pronounced "Cloud - in")
Office: Room 202A, Biological Sciences
Office Hours: Tuesdays 10:30-12:20 and Thursdays 10:30-11:30
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I receive a large volume of emails from several courses. To help me help you, please include:

- Your first and last names
- Course name (FL Natural History)

- * Please do NOT use the Webcourses mail system for correspondence.
- * I will try to respond to emails within 48 hours however, response time may be greater.
- * Please plan accordingly by not waiting to the last minute to contact me with questions or concerns.
- * Due to confidentiality, I will only reply to questions emailed from your Knights email.
- * Any questions about grades must be discussed in person and cannot be discussed via email.

Class Meeting Times: Tuesdays and Thursdays 9:00 am -10:20 am in BIO 212

Intended Audience: Advanced Biological Science majors & minors.

Course Prerequisite: Principals of Ecology (PCB 3044C) with a grade of C or better

Course Description:

General ecology, habitats, vegetation types, wildlife, and conservation issues of Florida. We will explore the diverse ecology that characterizes Florida and differentiates this region from any other area of the continental United States. In this course we will apply basic ecological principles to Florida's major natural habitats and communities (e.g. pine flatwoods, sandhill, scrub, freshwater and salt marsh, wet and dry prairie, cypress, mangrove, and hardwood swamps, coastal scrub and strand) and associated wildlife (emphasizing amphibians, reptiles, mammals and birds), ranging from north Florida flatwoods to south Florida Everglades. Additionally we will analyze the environmental history of the region including how people have used and impacted the different environments of Florida in the past and present and current challenges to resource management and conservation of the region. Supporting topics may include natural fire cycles, fire-mediated succession, watersheds, metapopulation ecology, invasive exotic plants and animals, effects of roads on wildlife, and conservation policies, land acquisition and management both past and present.

Course Goals:

After successfully completing this course, students will be able to:

- Define, apply, & use ecological principles to explain processes that affect the distribution & abundance of plants & animals in FL;
- Identify the main biological and physical features of Florida and some of its diverse environments;
- Explain how different environments within Florida were formed and are changing due to natural and human-driven processes;
- Explain ongoing debates of environmental issues affecting Florida;
- Determine if and how various economic and recreational human activities may be affecting the ecology and/or wildlife of Florida;
- Describe and analyze different views regarding how best to protect and/or restore the Florida environment.

Required Resources:

A. UCF Library Webpage Access: Necessary in order to be able to download articles from research journals.

B. Webcourses: This course is a web-enhanced class. Announcements, lecture notes, grades, etc. will be made available at this site.

Recommended Resources:

Myers, R. L. and J. J. Ewel. 1991. Ecosystems of Florida. University of Central Florida Press. 765 pp.

Whitney, E., D. B. Means, and A. Rudloe. 2014. Florida's Natural Ecosystems and Native Species (Vol. 1 FL Uplands, Vol. 2 FL Wetlands, Vol. 3 FL Waters). Pineapple Press. (or their 2004 single volume "Priceless Florida: Natural Ecosystems and Native Species")

Perry, J. and J. Greverus Perry. 1998. The Nature of Florida. University of Georgia Press. 238 pp.

Student Responsibilities:

Etiquette – Students should show proper classroom etiquette. Students should show up to class on time. *Please do not be late or leave early, this disrupts the class.* If this is unavoidable then you should sit near the door to reduce disruption to the class. All cell phones, pagers, etc. should be turned OFF (not on vibrate) when entering the classroom. Students should not disrupt other students (or the instructor) in class by talking unless instructed to do so by the instructor.

Email and Webcourses:

You will be expected to have daily access to Webcourses since I will be consistently posting assignment updates, additions, changes, clarifications, etc. All students at UCF are required to obtain a Knight's Email account and check it regularly for official university communications. If you do not own a computer, there are computers accessible to you in all UCF's computer labs, and most computer labs have computers connected to the internet. For further information on computer labs, please see the following website:

http://registrar.sdes.ucf.edu/webguide/index_quickfind.aspx.

Journal Readings and Discussions – Journal readings are designed to coincide with and supplement the lecture component of the course. Readings will be discussed in class and thus you are expected to have read the material prior to class. To encourage active participation in discussions you will be required to submit (via Webcourses) 3-5 insightful comments or questions by the start of class each day a reading is assigned. The quality of your comments and participation will determine your grade on this assignment.

Exams – There will be three unit exams. The questions will be a mixture of multiple choice, fill in the blank and short answer essay. All questions will pertain to material covered in lectures, textbook readings and additional assignments. The final exam will not be comprehensive. Please bring a #2 pencil with you to each exam. Cell phones and PDAs must be turned off and stowed during the exam period. Grades will be posted on WebCourses. Exams can be reviewed individually in my office hours.

Late For the Exam Policy - If you arrive late for any exam you will be allowed to take the test if no one has yet turned in an exam. However, you must turn in the test paper at the regular scheduled end of the test. You will not be allowed extra time unless a documentable emergency has occurred.

Makeup Exam Policy - If you miss an exam, you will not automatically be granted a make-up: these will be given only in exceptional circumstances, with written documentation from a competent authority (physician, coach, counselor, etc.). Make up exams, IF permitted, will be in essay format. Unexcused absence from an exam will result in a failing grade for the missed exam.

Research Proposal - An important goal for this semester is to write a proposal for research. This proposal will detail the experimental design to answer a set of hypotheses / questions concerning the distribution, abundance, or conservation of any organism or group of organisms in Florida. You probably want to know why this is a worthwhile goal. Most of you will take one of several career paths after undergraduate school: a professional position related to biology, medical school, or graduate school. In any of these careers, you will likely read and evaluate research or research proposals or you will write research proposals and do research. Developing and writing a research proposal in this course will improve your evaluation and writing skills in general and specifically for research proposals. Even if you do not take any of the above career paths, there is something in this for you: improved writing skills, improved interpersonal skills from working with a group, and improved evaluation and interpretation of research literature. I also believe that the detailed development of hypotheses, an essential precursor to good research, is often simplified when teaching the scientific process. In short, this will help you learn how science is done.

This project will be done in a group of 3 students and will involve 3 phases:

1. Preproposal
2. Proposal
3. Oral Presentation

Specific details of the expectations for this project will be distributed under separate cover.

Research Proposal Reviews – Each student will be given 2 of his peers proposals to review. Reviewing a proposal involves a lot more than assessing compliance, style, and checking for typos. Reviewers will consider innovation, intellectual merit, clarity, budget, and timeline and will ultimately submit a recommendation for or against “funding”. The quality of your review will determine your grade on this assignment.

Optional Book Review Assignment: This assignment is OPTIONAL. **Due 11/30 at 11:59 pm** submitted via Webcourses. If you choose to do this, it will be worth 3% of your total grade, replacing 3% of your lowest exam grade (making that one exam worth 20% rather than 23%). If you choose, pick an ecology themed book (see approved book list at end of syllabus) of at least 300 pages or more to read and

write a summary report demonstrating that you read the entire book and your understanding and opinions of the book. Summaries should be 500 to 750 words, no more, no less. Reviews should be for this class only and not a book used in another class. Summaries must be entirely your own work. Plagiarism will not be tolerated and will result in a failing grade for the course. I reserve the right to orally quiz you about the book if I suspect you have not read it.

Note - Optional assignments are not extra credit however like extra credit can boost your grade. As opposed to extra credit, which can be neutral or help your grade, optional assignments can benefit your grade IF you do a good job but could hurt your grade if you do a poor job. If you choose not to do the assignment it will not affect your grade. I design it this way as a way to encourage you to take the assignment seriously and to do a good job and to avoid you turning in a hastily prepared assignment in hopes of getting a point or two.

Performance Evaluation:	Proportion of grade
Midterm exams (3 x 22%)	66%
Comments and Discussion Participation	5%
Potential Research Topics	1%
Annotated Bibliography	2%
Research preproposal	5%
Research proposal	12.0%
Proposal reviews	3.0%
Oral Presentation	6.0%

Grading Scale:

A 93.0 – 100%	B+ 87.0 - 89.9%	C+ 77.0 - 79.9%	D+ 67.0 - 69.9%	F 0 - 59.9%
A- 90.0 - 92.9%	B 83.0 - 86.9%	C 73.0 - 76.9%	D 63.0 - 66.9%	
	B- 80.0 - 82.9%	C- 70.0 - 72.9%	D- 60.0 - 62.9%	

Grade Rounding Policy: The overall semester grade will not be rounded. In other words, either you have the grade or you don't. In other words, a 79.99 is still a 'C'. As there are many students in this class I strive for consistency and fairness. For this reason, there will be no exceptions to this policy and no other adjustments will be made (i.e. No additional curving or extra credit will be offered).

Ethics - UCF faculty supports the UCF Creed. Integrity - practicing and defending academic and personal honesty - is the first tenet of the UCF Creed. This is in part a reflection of the second tenet, Scholarship: - I will cherish and honor learning as a fundamental purpose of membership in the UCF community. - Course assignments and tests are designed to have educational value; the process of preparing for and completing these exercises will help improve your skills and knowledge. Material presented to satisfy course requirements is therefore expected to be the result of your own original scholarly efforts.

Plagiarism and cheating - presenting another's ideas, arguments, words or images as your own, using unauthorized material, or giving or accepting unauthorized help on tests - contradict the educational value of these exercises. Students who attempt to obtain unearned academic credentials that do not reflect their skills and knowledge can also undermine the value of the UCF degrees earned by their more honest peers.

UCF faculty members have a responsibility for your education and the value of a UCF degree, and so seek to prevent unethical behavior and when necessary respond to infringements of academic integrity. Penalties can include a failing grade in an assignment or in the course, the issuance of a 'Z' grade on your transcripts or suspension or expulsion from the university. See <http://www.osc.sdes.ucf.edu/> for more information about UCF's Rules of Conduct.

Dr. Klowden will issue a failing grade of "F" for the entire course for anyone caught plagiarizing or cheating.

Disability Access Statement:

The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Students who need accommodations must be registered with Student Disability Services, Ferrell Commons Room 185, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, before requesting accommodations from the professor.

Final Note:

The professor(s) reserve the right to change the syllabus and management of the class at any time during the semester. These changes will be announced in lecture.

TENTATIVE Course Calendar (subject to change)

^^Indicates that attendance is mandatory (Each unexcused absence on these days will result in 5% reduction to your proposal grade)

**Attendance at the presentations is mandatory (Unexcused absence will result in a 10% reduction to your course grade)

Week	Date	Topic / Reading	Important dates
1	8/25	Introduction – Library Resources	
	8/27	Natural Ecosystems and Native Species/ Topography / Climate / Soils Reading: 1. Bailey, H. H. 1924. The armadillo in Florida and how it reached there. <i>Journal of Mammalogy</i> 5:264-265. 2. Fitch, H. S., P. Goodrum, and C. Newman. 1952. The armadillo in the Southeastern United States. <i>Journal of Mammalogy</i> 33:21-37.	
2	9/1^^	Historical Biogeography Reading: Vermeij, G. J. 2005. One-way traffic in the western Atlantic: causes and consequences of Miocene to early Pleistocene molluscan invasions in Florida and the Caribbean. <i>Paleobiology</i> 31:624-642.	Organize Proposal Groups^^
	9/3	No Class – Football game	
3	9/8^^	Early explorers Reading: Bartram, W. and F. Harper. 1943. Travels in Georgia, and Florida, 1773-74. A Report to Dr. John Fothergill. <i>Transactions of the American Philosophical Society</i> 33:121-242.	- Potential research topics due by 9:00am - Proposal Working Groups^^
	9/10	Pine Flatwoods and Dry Prairies Reading: Main, M. M. and L. W. Richardson. 2002. Response of Wildlife to Prescribed Fire in Southwest Florida Pine Flatwoods. <i>Wildlife Society Bulletin</i> 30:213-221.	
4	9/15^^	High Pine Grasslands Reading: Wilson, C. W., R. E. Masters, and G. A. Bukenhofer. 1995. Breeding Bird Response to Pine-Grassland Community Restoration for Red-Cockaded Woodpeckers. <i>The Journal of Wildlife Management</i> 59:56-67.	Final research topic due by 12:00 pm - Proposal Working Groups^^
	9/17	Florida Scrub Reading: Hokit, D. G., B. M. Stith, and L. C. Branch. 1999. Effects of landscape structure in Florida scrub: a population perspective. <i>Ecological Applications</i> 9:124-134.	
5	9/22^^	Temperate Hardwood Forests (Hammocks) Reading:	- Annotated bibliography due by 9:00am - Proposal Working Groups^^

		Amartya K. S. et al. 2011. Sea level rise and South Florida coastal forests. Climatic Change 107:81-108.	
	9/24****	-----	Exam 1
6	9/29^^	Proposal Working Groups**	Proposal Working Groups^^ Deadline for initial group meeting with Dr. Klowden
	10/1	Rocklands, Upland Glades, and Dry Caves	Preproposal Due by 9:00am Contribution Statements Due by 9:00am
7	10/6	Wetlands intro / Seepage wetlands	
	10/8^^	Interior Freshwater Marshes	Proposal Working Groups^^
8	10/13	Interior Freshwater Swamps	
	10/15^^	Proposal Working Groups**	Proposal Working Groups^^
9	10/20	Lakes and Ponds	
	10/22^^	Rivers, Springs, and Aquatic Caves	Proposal Working Groups^^
10	10/27^^	-----	Exam 2
	10/29^^	Beach-Dune Systems and Maritime Forests	Proposal Working Groups^^
11	11/3	Coastal Intertidal Zones – Beaches and Tidal Marshes	
	11/5^^	Proposal Working Groups^^	Proposal Working Groups^^
12	11/10	Mangrove swamps	Proposals due
	11/12	Estuaries and Inshore Marine Habitats (sea grass, oyster bars, etc.)	
13	11/17	Coral Reefs and Sponge Communities	Proposal reviews due
	11/19^^	The Gulf and the Ocean	Presentation Working Groups^^
14	11/24^^	Presentation Working Groups^^	Presentation Working Groups^^
	11/26	No class – Thanksgiving	
15	Monday 11/30		Optional book review due Monday 11/30 by 11:59pm
	12/1**	Presentations***	Presentations*** Contribution Statements due by 9:00 AM
	12/3**	Presentations***	Presentations*** Contribution Statements due by 9:00 AM
Final	12/10**	Final Exam: 7:00 – 9:50 am	Final Exam: 7:00 – 9:50 am

Optional Book Review Reading List

Below is a list of approved Florida (and southeastern US) Natural history Themed Books. You may suggest a book not on this list but it cannot be one you have or are reading for another course and you must first email me for approval.

Nonfiction:

Forgotten Grasslands of the South - Natural History and Conservation by Reed F. Noss

Cypress Swamps by Katherine Carter Ewel and Howard T. Odum

Twilight of the Panther Biology, Bureaucracy and Failure in an Endangered Species Program by Ken Alvarez

A Stillness in the Pines. The Ecology of the red-cockaded Woodpecker by Robert McFarlane

Travels of William Bartram by William Bartram

The Swamp. The Everglades, Florida and the Politics of Paradise by Michael Grunwald

A Naturalist in Florida A Celebration of Eden by Archie Carr

The Seaturtle by Archie Carr

The Florida Scrub Jay Demography of a Cooperative- Breeding Bird by Glen E. Woolfenden and John W. Fitzpatrick

The Man Who Saved Sea Turtles Archie Carr and the Origins of Conservation Biology by Frederick Rowe Davis

The Economics of Everglades Restoration Missing Pieces in the Future of South Florida by Richard Weisskoff

Fiction:

The Everglades River of Grass by Marjorie Stoneman Douglas

Cross Creek by Marjorie Kinnan Rawlings

South Moon Under by Marjorie Kinnan Rawlings