

PCB 3354 - Tropical Ecology and Conservation

Fall 2018, 3 credits

Instructor: Dr. Gregg Klowden (pronounced "Cloud - in")
Office: Room 202A, Biological Sciences
Office Hours: Mondays, Tuesdays, and Wednesdays 3:00-4:15, or by appointment.
E-mail: gklowden@ucf.edu

I receive a large volume of emails from several courses. To help me help you, please include:

- Your first and last names
- Course name
- * 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 1:30-2:50 pm in BIO 209

Intended Audience: Biological Science majors & minors.

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

Course Description: This course is an introduction to the geography, ecology, and environmental problems encountered in various tropical ecosystems with particular emphasis towards terrestrial systems in tropical rainforests. You will study species diversity, community structure and biogeographic patterns of tropical flora and fauna in various ecosystems and the main abiotic and biotic characteristics that contribute to their distribution, abundance and dynamics including climate, hydrology, soils, nutrient cycles, species interactions and coevolution. In the last part of the course you will study the effects of human activities on species, biological communities and ecosystems and consider various conservation issues and strategies from both theoretical and practical standpoints.

Course Goals: I want you to take away several things from this course. I want to move beyond the "Discovery Channel" approach to the tropics and, while keeping a sense of the wonder of tropical diversity, help you develop a sound background in modern tropical ecology and conservation, and the tools to continue learning about and acting on behalf of tropical ecosystems.

Specifically, by the end of the course:

1. You should understand modern ecological and evolutionary theory that applies to "how the tropics work", and why tropical ecosystems are different (if they are) from temperate systems. For example, why are there are so many species in the tropics? How is species diversity maintained? How do physiological and behavioral adaptations shape interactions among organisms?
2. "The Tropics" are not monolithic – there are high diversity rain forests, low diversity dry forests, coastal mangroves, alpine páramo, seasonally flooded forests, and many kinds of agro-ecosystems - these systems vary widely in what makes them work. I want you to have a working knowledge of ecosystem diversity in the tropics, and its biogeographic distribution.
3. You should come away from the course with a better understanding of some of the threats to tropical ecosystems

Resources:

A. Suggested Text: Kricher, John. 2011. Tropical Ecology. Princeton University Press. Available at Book Store.

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

C. [Webcourses.ucf.edu](http://webcourses.ucf.edu): Tropical Ecology is a web-enhanced class. Announcements, lecture notes, grades, study tips, and relevant web links will be available at this site. Before emailing me, please check this site for frequently asked questions.

Additional Resources:

- Osborne, P. L. 2000. Tropical Ecosystems and Ecological Concepts. Cambridge University Press.
- Sodhi, N. S., B. W. Brook, and C. J. A. Bradshaw. 2007. Tropical Conservation Biology. Blackwell Publishing
- Kellman, M. and R. Tackaberry. 1997. Tropical Environments. Routledge.
- Ghazoul, J. and D. Sheil. 2010. Tropical Rain Forest Ecology, Diversity, and Conservation. Oxford U. Press.

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.

Exams - There will be two midterm exams and one non-comprehensive final exam. The questions will be a mixture of multiple choice, fill in the blank and short answer essay. Please bring your student ID and a #2 pencil with you to each exam. Cell phones must be turned off and stowed during the exam period. Grades will be posted on WebCourses and I will inform the class when they are posted. Exams will not be returned but 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 noone 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 only be granted a make-up 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.

Presentations - Pick one of the dates/tropical regions listed below, locate a related conservation focused article from a peer reviewed journal ~~from the last 15 years~~, and present a 4-6 minute PowerPoint summary of the article.

- 10/16 - Mexico, Central America, and Carribean
- 10/23 - Tropical South America
- 10/30 - Tropical Africa – North of equator
- 11/6 - Tropical Africa – South of equator
- 11/13 - India, Southeast Asia, and Phillipines, and nearby islands
- 11/15 - Indonesia, Borneo, New Guinea, Australia, and nearby islands

To locate an article, search for relevant articles by searching databases such as Web of Science (available on UCF library website) or Google Scholar or by searching specific journals (e.g. "Tropical Conservation Science", "Journal of Tropical Ecology", "Tropics", etc.) (Hint – Use search terms including conservation and a country name (e.g. conservation Gabon))

10 presentations will be permitted for each region. Presenters for each region will be assigned on a 1st come, 1st served basis. To assure that a spot for the region is still available and that the article is relevant, appropriate, and has not already been selected by another classmate, all articles must 1st be approved by Dr. Klowden. All presentation topics must be approved by 9/25. This means you must start the process prior to this date in case your region/article is taken and you need to find an alternate article. A penalty of 1% from your final course grade will be deducted for each day late.

To reserve your region and article, prior to 9/25 send an email to Dr. Klowden with:

- (a) the subject "Conservation Presentation Topic";
- (b) your desired region clearly specified;
- (c) Citations for at least 2 preferred articles.

Citations should be in APA style (Author, A. (Publication Year). Article title. *Periodical Title*, Volume(Issue), pp.-pp.).

For example:

Kershaw, F. et al. (2013). Informing conservation units: barriers to dispersal for the yellow anaconda. *Diversity and Distributions*, 19(9), 1164-1174.

- (d) Web links to your 2 (or more) preferred articles. Links should connect DIRECTLY to the article description on the journal's website not to a page at the UCF library, Web of Science, Google Scholar, etc.

Dr. Klowden will send announcements as each region fills. As this process is 1st come, 1st served, the sooner you act the more likely you will get your preferred region and article.

Presenters must bring their presentation on a USB flashdrive. Due to limited time, you will not be permitted to log into email or any web source. You must bring it on a USB flashdrive.

Presentations will be graded by Dr. Klowden based on content quality, PowerPoint quality, and presentation style. Audience members will also evaluate presentations. The top 2 presentations for each day as determined by your peers will receive 1 and 2% extra-credit added to their final course grades.

It is essential that you practice, practice, practice to not only improve your presentation but to assure that it falls within the 4-6 minute time frame. As there are many presentations on each day it is essential that you do not exceed the allotted time to assure that there is enough time for all scheduled presentations. Substantial reductions will be made for exceeding 6 minutes.

Journal article summaries - Select 2 of the papers presented by your peers to summarize. A list of all papers to be presented will be provided as soon as all regions/articles have been assigned. Each summary should be 750-1000 words in length, no more, no less. Both summaries (2 x 750-1000 words) should be combined into 1 single MICROSOFT WORD compatible document (i.e. .doc, .docx, or .rtf **NOT PDF**) and submitted by the due date (see schedule) via the appropriate link on Webcourses. Summaries may be submitted anytime prior to the due date. Late assignments will incur a penalty of 10% for each late day. Summaries will be graded based on completeness, clarity, and grammar.

Your summaries should include 3 distinctly labeled sections:

- A. Article Citation - APA style (Author, A. (Publication Year). Article title. *Periodical Title*, Volume(Issue), pp.-pp.)

For example:

Kershaw, F. et al. (2013). Informing conservation units: barriers to dispersal for the yellow anaconda. *Diversity and Distributions*, 19(9), 1164-1174.

- B. Summary

- C. Word count - Number of words from your summary section (Can easily be automatically counted in Microsoft Word).

Summaries must be entirely your own work. They will be submitted to Turn-it-in to check for plagiarism so be certain that ALL words are your own. When taking notes it is recommended to place any copied material in quotes to be sure you avoid using other people's writing in your final summary. Unless absolutely essential, quotations should be avoided. You are encouraged to discuss the articles with classmates however discussion is where it should end. In other words be sure each of you writes a completely original review. Plagiarism will not be tolerated and will result in a failing grade for the course or expulsion from UCF.

Performance Evaluation:

	Proportion of grade
Midterm exams (2 x 30%)	60%
Final exam	30%
Presentation	5%
Summaries	5%

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: If your final total across all grading components is less than or equal to one percent below a higher grade, rounding up to the higher grade will occur only if you scored at the higher grade on 2 of the 3 exams. For example, if your overall course grade was an 89% and your exam scores were 84, 91, and 92, your final grade will be rounded up to an A- because two of the tests scored at 90 or above. If however your exam grades were 85, 89, and 95, the grade would remain a B+ because only 1 of your 3 exam grades were 90 or above. 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).

Academic Integrity and 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.

Students should familiarize themselves with [UCF's Rules of Conduct](#). According to Section 1, "Academic Misconduct," students are prohibited from engaging in:

- *Unauthorized assistance:* Using or attempting to use unauthorized materials, information or study aids in any academic exercise unless specifically authorized by the instructor of record. The unauthorized possession of examination or course-related material also constitutes cheating.
- *Communication to another through written, visual, electronic, or oral means:* The presentation of material which has not been studied or learned, but rather was obtained through someone else's efforts and used as part of an examination, course assignment, or project.
- *Commercial Use of Academic Material:* Selling of course material to another person, student, and/or uploading course material to a third-party vendor without authorization or without the express written permission of the university and the instructor. Course materials include but are not limited to class notes, Instructor's PowerPoints, course syllabi, tests, quizzes, labs, instruction sheets, homework, study guides, handouts, etc.
- *Falsifying or misrepresenting* the student's own academic work.
- *Plagiarism:* Using or appropriating another's work without any indication of the source, thereby attempting to convey the impression that such work is the student's own.
- *Multiple Submissions:* Submitting the same academic work for credit more than once without the express written permission of the instructor.
- *Helping another violate* academic behavior standards.

Students who engage in academic misconduct contradict the educational value of your courses and undermine the value of the UCF degrees earned by their more honest peers.

For more information about Academic Integrity, students may consult [The Center for Academic Integrity](#).

For more information about plagiarism and misuse of sources, see "[Defining and Avoiding Plagiarism: The WPA Statement on Best Practices](#)".

Responses to Academic Dishonesty, Plagiarism, or Cheating

Students should also familiarize themselves with the procedures for academic misconduct in UCF's student handbook, [The Golden Rule](#). UCF faculty members have a responsibility for students' education and the value of a UCF degree, and so seek to prevent unethical behavior and when necessary respond to academic misconduct. Penalties can include a failing grade in an assignment or in the course, suspension or expulsion from the university, and/or a "Z Designation" on a student's official transcript indicating academic dishonesty,

where the final grade for this course will be preceded by the letter Z. For more information about the Z Designation, see <http://goldenrule.sdes.ucf.edu/zgrade>.

Course Accessibility Statement

The University of Central Florida is committed to providing access and inclusion for all persons with disabilities. Students with disabilities who need disability-related access in this course should contact the professor as soon as possible. Students should also connect with [Student Accessibility Services](#) (Ferrell Commons 185, sas@ucf.edu, phone (407) 823-2371). Through Student Accessibility Services, a Course Accessibility Letter may be created and sent to professors, which informs faculty of potential access and accommodations that might be reasonable. Determining reasonable access and accommodations requires consideration of the course design, course learning objectives and the individual academic and course barriers experienced by the student.

Campus Safety Statement

Emergencies on campus are rare, but if one should arise in our class, everyone needs to work together. Students should be aware of the surroundings and familiar with some basic safety and security concepts.

- In case of an emergency, dial 911 for assistance.
- Every UCF classroom contains an emergency procedure guide posted on a wall near the door. Please make a note of the guide's physical location and consider reviewing the online version at http://emergency.ucf.edu/emergency_guide.html.
- Students should know the evacuation routes from each of their classrooms and have a plan for finding safety in case of an emergency.
- If there is a medical emergency during class, we may need to access a first aid kit or AED (Automated External Defibrillator). To learn where those items are located in this building, see <http://www.ehs.ucf.edu/workplacesafety.html> (click on link from menu on left).
- To stay informed about emergency situations, sign up to receive UCF text alerts by going to my.ucf.edu and logging in. Click on "Student Self Service" located on the left side of the screen in the tool bar, scroll down to the blue "Personal Information" heading on your Student Center screen, click on "UCF Alert," fill out the information, including your e-mail address, cell phone number, and cell phone provider, click "Apply" to save the changes, and then click "OK."
- Students with special needs related to emergency situations should speak with their instructors outside of class.
- To learn about how to manage an active-shooter situation on campus or elsewhere, consider viewing this video. [You CAN Survive an Active Shooter](#)

Deployed Active Duty Military Students

If you are a deployed active duty military student and feel that you may need a special accommodation due to that unique status, please contact your instructor to discuss your circumstances.

Copyright

This course may contain copyright protected materials such as audio or video clips, images, text materials, etc. These items are being used with regard to the Fair Use doctrine in order to enhance the learning environment. Please do not copy, duplicate, download or distribute these items. The use of these materials is strictly reserved for this online classroom environment and your use only. All copyright materials are credited to the copyright holder.

Third-Party Software and FERPA

During this course you might have the opportunity to use public online services and/or software applications sometimes called third-party software such as a blog or wiki. While some of these could be required assignments, you need not make any personally identifying information on a public site. Do not post or provide any private information about yourself or your classmates. Where appropriate you may use a pseudonym or nickname. Some written assignments posted publicly may require personal reflection/comments, but the assignments will not require you to disclose any personally identity-sensitive information. If you have any concerns about this, please contact your instructor.

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 3% reduction to your course grade)

Week	Date	Topic/ Reading	Important dates
1	8/21	Syllabus Chapter 1 – What and where are the tropics? Chapter 4 – Tropical biodiversity	
	8/23	Chapter 4 (continued)	
2	8/28	Chapter 4 (continued)	
	8/30	Chapter 7 - Biotic interactions and coevolution in rainforests	
3	9/4	Chapter 8 - Trophic dynamics in evolutionary context	
	9/6	Chapter 8 (continued)	
4	9/11	-----	Exam 1 – all material since beginning
	9/13	Chapter 10 - Nutrient cycling and tropical soils	
5	9/18	Chapter 3 – Inside lowland tropical rainforests: structure	
	9/20	Chapter 6 – Lowland tropical rainforest development & dynamics	
6	9/25	Chapter 5 – Lowland tropical rainforest tree species richness	Presentation topic approval deadline
	9/27	Survey and comparison of select rainforests	
7	10/2	Rainforest animals	
	10/4	-----	Exam 2- all material since exam 1
8	10/9	Chapter 11 - Tropical savannas and Dry Forests	
	10/11	Chapter 12 – Mountain ecosystems	
9	10/16***	- Conservation Presentations - Mexico, Central America & Caribbean	
	10/18	Tropical deserts	
10	10/23***	- Conservation Presentations- Tropical South America	
	10/25	Tropical rivers and floodplains	
11	10/30***	-Conservation Presentations--- Tropical Africa (N of equator)	
	11/1	Tropical mangroves, seagrasses, and estuaries	
12	11/6***	-Conservation Presentations--- Tropical Africa (S of equator)	
	11/8	Tropical coral reefs	
13	11/13***	-Conservation Presentations – India, SE Asia, Phillipines, etc.	
	11/15***	-Conservation Presentations - Indonesia, New Guinea, Australia, etc.	
14	11/20	Tropical islands	Summaries due by 11:59 p.m
	11/22	No class – Thanksgiving	
15	11/27	Chapter 14 - Forest fragmentation and biodiversity	
	11/29	TBA	
Final	12/4 Tuesday 1:00-3:50 p.m.	-----	Final Exam - all material since exam 3