

PCB 3044 L SYLLABUS – SPRING 2015

Labs Meet: Room 305 in Biology or lot E4 (near Softball Stadium) – see schedule on pp. 2 & 3

Instructors: **Madison Hall** BIO 421, madison.hall@knights.ucf.edu
Office Hours: Tues: 11:30 – 1 pm, Wed: 11:30 – 1
Ian Kutch BIO , kutch.bio@knights.ucf.edu
Office Hours:

Text: Lab Manual is free on WebCourses. Alternatively, it can be located through myUCF: Login to the myUCF portal (<https://my.ucf.edu>) and click on the "Online Course Tools" tab to access the course.

Intended Audience: Biological Science majors, Science Education majors, Pre-professional students, and selected graduate students.

Course Description: This course is intended to provide hands-on experience in conducting research in ecology. You will gain ample field experience and participate in a field experiment focused on the effects of prescribed fire on pine flatwoods habitat in the UCF Arboretum. Critical components of an individual lab report will be written based on this experiment, the primary reason being to improve science writing skills and to better understand what goes into publishing in scientific journals.

Course Prerequisites: You should have minimally taken BSC 2010C & BSC 2011C.

Performance Evaluation:

Research Report*	30%
Summary papers (2 @ 10% each)**	20%
In-Class assignments (5 @ 5% each)***	25%
Plant I.D. quiz	10%
Participation	<u>15%</u>
Total =	100%
Possible Bonus pts. ****	10

Grade scale: A = 100-93.3, A- = 93.2-90, B+ = 89.9-86.7, B = 86.6-83.4, B- = 83.3-80, C+ = 79.9-76.7, C = 76.6-73.4, C- = 73.3-70, D+ = 69.9-66.7, D = 66.6-63.4, D- = 63.3-60, F < 59.9

*The Research Report grade is actually broken into 6 components- a rough draft and final version of most of the integral parts of a scientific paper (written in this order): 1) Materials and Methods/Hypotheses, 2) Introduction, and 3) Results/Discussion – these will all be assigned at different points in the semester and graded according to corresponding rubrics. Final drafts are worth twice as much as rough drafts.

**Paper summary 1 is chosen for you. For paper summary 2 you will be able to choose from 3 articles.

***All due in class – no make-ups allowed.

****Given out and added to grades at the discretion of your instructor.

Participation: You are expected to be a fully-cooperating member of lab teams. You will work together to collect data that you will share with the class for everyone to use in their research reports. As such, the grades of other students depend on you, too. Additionally, class attendance and punctuality, your cooperation with group members to complete in-class assignments, and the lab instructor's independent observations of your participation will factor into this portion of your grade. Play nice, do your part, and you'll do just fine!

Attendance: **Attendance is mandatory.** Almost every lab is conducted with one or more group members, so if you miss the lab, it not only affects you, but your group members as well. Everyone is allowed one excused absence with an official note. This also the ONLY way that in-class assignments can be made up, but they must be completed by the class after the note is given to the instructor. One unexcused absence will result in a 5% reduction of your final grade, a second absence

will result in a 10% reduction in your final grade, and so on, which will heavily impact your grade.

We begin lab at the time that it is listed at myUCF. If you are more than 10 minutes late, you will be allowed to come into lab and receive participation points for the day, BUT you will receive an absence for that day. **DON'T BE LATE!**

Late Policy: All assignments are due on WebCourses before lab begins. If you do not upload your assignment on time, at least 10% will be deducted from your assignment grade for each day that it's late. If you are absent on a day that an assignment is due and you provide documentation there won't be a late penalty, but you must turn in your assignment ASAP. Summary Papers will not be accepted late.

Your Responsibilities:

- Read the lab manual BEFORE you come to class
- Assignments are to be submitted on WebCourses before the start of class on the day the assignment is due.
- Print needed instructions and data sheets for each week as needed.
- Don't be late: all instructions are given within the first 10 minutes of class.
- ASK QUESTIONS – in class, via email, in office hours, by appointment, on the WebCourses Discussion Board – there is NO excuse for not finding an answer to something!
- THINK! Ecology forces us to go beyond memorizing, especially when doing research. This class is intended to teach you how to be independent and solve problems on your own before asking your TA.
- Cooperate with your team and others – many hands make less work, and 15% of your grade depends on your cooperative behavior.
- Dress for the job. Bring water to the field. **Wearing closed-toe shoes is MANDATORY on field days.** Be prepared to get sweaty and dirty while doing field work. We recommend long pants, a long-sleeved shirt, a hat, insect spray, and sunblock. In addition to the usual biting/stinging insects, ticks are also known to be encountered, and there has been at least one recent sighting of a young rattlesnake, so be careful!
- Read and understand the UCF Rules for Student Conduct [<http://www.goldenrule.sdes.ucf.edu>] and UCF Academic Regulations and Procedures [http://www.ucf.edu/catalog/current/academic_regulations_and_procedures/index.html]: These rules apply to you and will be followed in the course.

Student Disabilities:

All reasonable accommodations will be made for disabilities documented through the Office of Student Disability Services (SRC 132; 407-823-2371).

Planned Lab Schedule (subject to change)

Emphasized dates in bold are field days - bring water and dress appropriately!

Meet at:	Week of:	Lab Topics	Lab Manual Chapter	Due
305	Jan 12/13	-Introduction to Lab -Goals and safety -Overview of WebCourses & Lab Manual -Hypothesis writing		
	<i>Jan 19/20</i>	<i>No class- MLK Jr. Day</i>		
305	Jan 26/27	-Library tutorial -Overview of field experiment -Methods and Introduction section Power Point - In-Class Assignment 1: fire ecology literature review		In-Class Assignment 1

E4	Feb 2/3	<u>Arboretum Trip (1)</u>		Report Section— Rough draft of Methods/Hypotheses
305	Feb 9/10	-Scientific paper overview – how to read, what to focus on -Power Point/field notes review of plants - In-Class Assignment 2: Excel/statistics exercise		In-Class Assignment 2
E4	Feb 16/17	<u>Arboretum Trip (2)</u>		Report Section— Rough draft of Introduction
E4	Feb 23/24	<u>Arboretum Trip (3)</u> -Paper summary discussion -Practice plant I.D. Quiz (5 bonus points)		Paper summary 1
E4	Mar 2/3	<u>Arboretum Trip (4) & Data collection (1)</u> -Plant I.D. Quiz		Report Section— Final Introduction
E4	Mar 9/10	<u>Data collection (2)</u>		Paper summary 2
E4	Mar 16/17	<u>Data collection (3)</u> -Finish Lab Report data collection		
305	Mar 23/24	-Results/Discussion Power Point -Begin Lab Report calculations		Report Section— Final Methods/Hypotheses
305	Mar 30/31	- In-Class Assignment 3: complete Lab Report calculations -Begin Fire Lab Graphs		In-Class Assignment 3
305	April 6/7	-In-Class Assignment 4: complete Fire Lab Graphs -Discuss interpretations of data		In- Class Assignment 4 Report Section— Rough draft of Results/Discussion
305	April 13/14	-In-Class Assignment 5: Mock town-hall meeting		In-Class Assignment 5
E4	April 20/21	<u>Arboretum Trip (5)</u> -Learn about more of Florida’s interesting ecosystems with a professional ecologist		
	<i>April 27/28</i>	<i>No classes</i>		Report Section— Final Results/Discussion