

BY ENROLLING IN THIS CLASS YOU AGREE TO EVERY ITEM IN THIS SYLLABUS; THIS INCLUDES THE FACT THAT IT IS POSTED ON WEBCOURSES AND NOT HANDED OUT DIRECTLY.

PCB 4683 Evolutionary Biology Spring Semester, 2013

This course provides an introduction to the topics of evolutionary biology, population biology, and population genetics. The class will focus on learning logical, scientific thought and the major concepts in evolutionary biology. Basic genetics will be considered as the foundation underlying most aspects of evolutionary biology. Concepts in speciation, adaptation, classification, and macroevolution will be considered. The importance of evolutionary concepts to all facets of biology will be stressed, with special emphasis on the interplay between evolution and the traditional fields of ecology, genetics, and development.

Course objectives

- To become skilled in scientific thought and discussion.
- To understand the principles of population genetics including selection, genetic drift, linkage, and gene flow.
- To understand the mechanisms of diversification.
- To understand the basics of evolution and how it applies to all life.

PREREQUISITES:

A grade of C or better in undergraduate genetics and ecology courses or consent of the instructor. A good understanding of basic genetics and ecology are vitally important to your success in this class.

TIME AND PLACE:

Lecture: 10:00 -11:50pm Tuesday and Thursday in BA 119.

Lab 11: 8:30 – 10:20am Monday in BL, Rm 414

Lab 12: 10:30 – 12:20pm Monday in BL, Rm 414

Lab 13: 12:30 – 2:20pm Monday in BL, Rm 414

CREDIT:

Lecture (PCB 4683A): 4 semester hrs. Lab (PCB 4683L): 1 semester hr.

LECTURE INSTRUCTORS	LABORATORY TEACHING ASSISTANTS
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OFFICE HOURS:

I strongly encourage that you take advantage of our office hours. Generally, we will be available during our respective office hours. However, this may not be the case on any specific day. Therefore, you are requested to email and schedule appointments for all of us. If you cannot make any of the scheduled office hour times, feel free to contact Mr. Territo to schedule an appointment outside of the regular office hours. For questions concerning the class please see Gregory Territo, Alexa Trujillo, or Cory Parks (our undergraduate TA) and for the lab see either Gina Ferrie or Alexa Trujillo. Mr. Territo's office hours will

be Tuesday 12:00PM-1:00PM, Wednesday 9:00AM-11:00AM, and Thursday 1:00PM-3:00PM. Ms. Ferrie's are Monday 12:30PM-3:00PM and Thursday 12:00PM-2:30PM, and Ms. Trujillo's are Monday 10:30AM-12:00PM and Tuesday 1:00PM-2:00PM. Both are available by appointment as well.

WEBCOURSES SITE:

I have a course web site set up on WEBCOURSES (<https://webcourses.ucf.edu>). I will use this to post a course outline, the syllabus, announce exam dates, PowerPoint notes, homework assignments and for you to take online quizzes. You are required to take online quizzes almost weekly, you get two attempts and the highest score will count towards your grade.

REQUIRED TEXT:

The fifth edition of *Evolutionary Analysis* by Jon Herron and Scott Freeman. Prentice Hall, Inc., Upper Saddle River, NJ.

EVALUATION:

Your grade will be comprised of three exams, a cumulative final, in-class and online quizzes, homework, and writing assignments. Each exam is worth 20% and the final is worth 25%; Webcourses and in class quizzes, writing assignments and homework are worth 15%. Exams may include multiple choice, short answer, essay questions, and math problems. All exams in this course, including the final, are *cumulative*; each exam will emphasize specific material covered since the previous exam, but each will also include questions that require you to draw on concepts or specific information learned earlier in the course. Evaluation and grading in lab (PCB 4683L) is separate from lecture grading; procedures will be announced in lab.

Grade Breakdown for Lecture:

Exam 1	20%
Exam 2	20%
Exam 3	20%
Final Exam	25%
Quizzes & Assignments	15%

ONLINE QUIZZES

Online quizzes are posted on webcourses via the quiz link. These quizzes should encourage you to read ahead and come to class prepared for the lecture – therefore quizzes are often due on the chapter *before* we've covered it in class. There will be a total of nine online quizzes throughout the semester. Due dates are listed on the syllabus schedule and on the webcourses calendar. You will be able to drop your lowest online quiz score of the semester and you will be able to take each quiz twice, keeping the highest score.

ATTENDANCE:

Attendance is not required, although you will learn more effectively if you actively attend and interact in class. Also, I will give pop quizzes and in-class assignments throughout the semester, so if you miss class without an excused absence, you will lose those points towards your grade.

FINAL AND COURSE GRADES:

There will be a **comprehensive** final exam for this course worth 25% of your grade. The final exam is Tuesday April 29TH at **10:00-12:50pm**. There will be **no** makeups for the final exam, if you miss the final you will be scored zero.

The following scale will be used to assign course grades. **THERE WILL BE NO CURVES OR DROPPED TESTS.**

93-100 = A	77-79 = C+
90-92 = A-	73-76 = C
87-89 = B+	70-72 = C-
83-86 = B	60-69 = D
80-82 = B-	≤ 59 = F

MAKEUPS:

Arrive on time to all exams. If you arrive late or miss an exam without a legitimate, UCF approved excuse (as defined in the UCF undergraduate catalogue), you will receive a zero for that exam. If an excused absence forces you to miss an exam, you need to make arrangements **prior to** the exam being given, if at all possible. If you do not make prior arrangements, the exam will be scheduled at the Mr. Territo's discretion. There will be **no makeups** for unexcused missed quizzes (both in class and online), in-class assignments, or homework. Excused absences will be dealt with on a per-situation basis for in-class quizzes and assignments. There will be **no makeups** for online quizzes; remember you get to drop your lowest online quiz score! If you are not going to be in class due to an excused absence you **must** turn in the assignment **prior** to the missed class (due date), if possible, to earn credit.

CHEATING:

Don't! I will not tolerate cheating or plagiarism of any type and will pursue disciplinary actions to the fullest extent possible. Copying word for word from a reference is plagiarism, even if you cite the reference, thus rewrite in your own words and then cite. The guidelines of the "Golden Rule" will apply. In the event of academic dishonesty in this class, I have the option of assigning a Z designation (see <http://z.ucf.edu/>).

WITHDRAWAL:

The deadline for withdrawal without penalty is published in the schedule, Tuesday March 18, 2014. You will need to decide whether or not to stick with the course by that time. I do not give grades of Incomplete.

EXPECTATIONS:

You should have certain minimal expectations of us (all instructors). Among other things, you can expect us to (1) show up for class, (2) be punctual, (3) be prepared for class, (4) not waste your time, (5) answer your questions to the best of our ability, (6) do our best to present a thorough, modern perspective on the subject matter, (7) be fair in our evaluation of your performance, and (8) respect you as an individual. We, likewise, have expectations of you. Most of these should be obvious, but we will state them here so that there is no misunderstanding. We expect you to (1) show up for class, (2) **do not come in late or leave early**, (3) sit near the front of the room to facilitate effective communication, (4) not talk in class or otherwise disrupt the learning environment for others (**no cell phones**), (5) come to class prepared by reading the designated materials and completing assignments, (6) ask questions as appropriate and relevant to the material under discussion, (7) study hard, and (8) give us your "best shot" at doing well in the course.

Please do not be late or leave early, this disrupts the class. Turn off or silence cell phones prior to entering the room. If a TA or I find/observe you using a cell phone or other electronic device during any exam or in-class quiz you will be automatically given a zero on that exam or in-class quiz and turned in to student conduct! There are NO exceptions for this policy.

TENTATIVE LECTURE OUTLINE AND DISCUSSION TOPICS

We reserve the right to change this schedule on a moment's notice; changes will be posted on the course web site.

Date	Topic/Activity	Reading
1/7/14	Introduction to Class, Evolution, and Science	Chapter 1
1/9/14	Chapter 1 and Scientific Method	Chapter 1
1/14/14	The Pattern of Evolution	Chapter 2; Online quiz 1 due by 9:59am (Chapter 1-2)
1/16/14	Darwinian Natural Selection	Chapter 3
1/21/14	Finish Chapter 3	Chapter 3
1/23/14	Phylogenetic Reconstruction	Chapter 4; Online quiz 2 due by 9:59am (Chapter 3-4)
1/28/13	Phylogenetic Reconstruction	Chapter 4
1/30/14	Mutation and Genetic Variation	Chapter 5
2/4/14	Exam 1	Focus: Chapters 1-5
2/6/14	Population Genetics	Chapter 6; Online quiz 3 due 9:59am (Chapter 6)
2/11/14	Population Genetics	Chapter 6;
2/13/14	Migration, Drift, and Nonrandom Mating	Chapter 6 & Chapter 7; Online quiz 4 due 9:59am (Chapter 7)
2/18/14	Migration, Drift, and Nonrandom Mating	Chapter 7
2/20/14	Migration, Drift, and Nonrandom Mating	Chapter 7
2/25/14	Linkage & Sex	Chapter 8; Online quiz 5 due 9:59am (Chapter 8)
2/27/14	Exam 2	Focus: Chapters 6-8
3/4/14	Spring Break (No class)	
3/6/14	Spring Break (No class)	
3/11/14	Studying Adaptation/ Experimental design	Chapter 10; Online quiz 6 due 9:59am (Chapter 10)
3/13/14	Sexual Selection	Chapter 11; Online quiz 7 due 9:59am (Chapter 11)
3/18/14	Sexual Selection	Chapter 11
3/20/14	Kin Selection and Social Behavior	Chapter 12; Online quiz 8 due 9:59am (Chapter 12)
3/25/14	Life history Evolution	Chapter 13
3/27/14	Evolution & Human Health	Chapter 14
4/1/14	Exam 3	Focus: Chapters 10-14
4/3/14	Genome Evolution	Chapter 15
4/8/14	Species Concepts, Mechanisms of Speciation	Chapter 16
4/10/14	Species Concepts, Mechanisms of Speciation 2	Chapter 16; Online quiz 9 due 9:59am (Chapter 16)
4/15/14	Development and Evolution	Chapter 19
4/17/14	Human Evolution	Chapter 20
4/22/14	Study Day (No classes)	
4/29/14	Final Exam 10:00-12:50pm	~50% Chapter 15, 16, 19, 20 ~50% cumulative