

# PCB 4674 – Evolution (online)

Class Numbers 14264, 14265

Syllabus for Summer 2019

## I. Course Description and Prerequisites

Processes and mechanisms of evolution, including population genetics, speciation, patterns of evolution and molecular evolution. 4 credits.

**Prerequisites:** BSC 2010/2011 and labs or the equivalent. Familiarity with Mendelian genetics, basic molecular biology, and high-school algebra.

## II. Sections

Class Numbers 14264, 14265  
First day of classes: 13 May 2019  
Last day of classes: 9 Aug 2019

## III. Instructors

**Course Instructor:**

**Norm Douglas, PhD**

Department of Biology

Office: Carr 618a

Office Hours: See “Office Hours”, Section VII, g. below.

Primary contact: Canvas messaging

E-mail (only if no response on Canvas for >24h)

[nadouglas@ufl.edu](mailto:nadouglas@ufl.edu)

**Teaching Assistants:**

(use Canvas messaging first!)

**Pratush Brahma:**

[pratush.brahma@ufl.edu](mailto:pratush.brahma@ufl.edu)

## IV. Course Communications

**Course Website:**

**A. Contacting Your Instructors:**

Please use the inbox function on Canvas to email your instructors. If for some reason this doesn't work, any e-mail correspondence must originate from your @ufl.edu account, have your full name in the body of the e-mail, and contain “PCB 4674” in the subject line. E-mails not meeting these requirements may not be recognized by our e-mail filters, and thus may not be answered. Non-grade-related questions can

also be posted to the “Course Mechanics” and “Raise Your Hand” discussion boards, from which you may get an answer from any of the instructors or your fellow students more promptly (see Section IX, “Getting Help”). Barring unusual circumstances, expect a reply within 24 hours during the week, and 48 hours over the weekend. E-mails and Discussion Board posts are checked at least once per day, but sometimes not more than that.

**B. Communications From Your Instructors:**

Each student is solely responsible for reading and following the instructions, guidelines and schedules in this syllabus and on the course webpage. Not having read the information in this syllabus, on the webpage, or in course announcements will not constitute an excuse for missing deadlines, assignments, or other assessments. Please set your preferences in Canvas so that you receive timely notifications of course announcements and other information.

## V. Course Resources

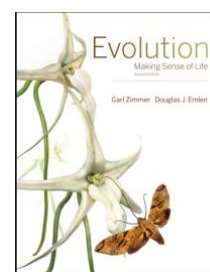
**A. Textbook**

*Evolution: Making Sense of Life*, 2ed by Carl Zimmer & Douglas Emlen. Roberts and Company (publisher), 2015. [Textbook publisher web site](#).

A copy of this textbook is on reserve at the Marson Science Library.

**B. Course Website (Canvas)**

Class material - including the syllabus, handouts, assignments, and gradebook – will be posted on the course [Canvas website](#). For help with Canvas, call the UF Computing Help Desk at 352-392-4357, or visit the [e-Learning support website](#).



## VI. Course Objectives

This course will provide a comprehensive introduction to the current field of evolutionary biology, including the theoretical background as well as an introduction to current research in experimental evolution. By the end of this course you should be able to see how evolution provides a framework for the broader field of biology, and have a basic understanding of the major topics in evolutionary biology: the theory of evolution by natural selection, the history of evolutionary thought, population genetics, sexual and kin selection, evolutionary trees/phylogenies, and how new species form.

Lectures will cover a variety of topics within the field of evolutionary biology. We will examine the theoretical basis of these various topics in detail, break that theoretical basis down into its underlying components, and examine the mathematical theory underlying the main conceptual ideas. We will also examine how evolutionary theory can be applied to real-world examples, particularly in issues relevant to medicine, agriculture, conservation, and sociology.

In addition to lectures there will be a series of discussions, workshop activities, and computer exercises in the context of the “laboratory” portion of the course. Discussions may involve readings from the primary literature followed by presentations, analysis, and/or discussion by groups of students. Computer simulations will be used to illustrate a variety of concepts and methods of analysis used in modern evolutionary biology.

## VII. Course Policies

**A. Time Commitment**

The UF College of Liberal Arts and Sciences assumes that each student will devote 3-4 hours per week per credit-hour to each course during the regular semester. Because PCB 4674 is 4 credits, each student should therefore expect to devote 12-16 hours per week to this course in a 15-week semester.

**B. Attendance**

Students are responsible for all material presented in lectures, labs and in the assigned readings. Active, timely participation in graded group discussions is essential. Please note that due to the online nature of the course, neither assignment or discussion points can be made up, regardless of the reason.

**C. Quizzes**

Quizzes must be completed by the end of the module deadline. There will be no make-up quizzes.

**D. Exams**

Any material covered in the lecture videos, the “lab” assignments, or assigned in the reading or discussions may be included in the exams. This can include textbook illustrations, films, Powerpoint slides. Take notes! Exams will be multiple choice, and questions will reflect a level of difficulty and sophistication appropriate to an upper-division course for majors. Exams will be taken using ProctorU during a scheduled window. For further information, please see the ProctorU information in the Start Here section of the course. Make-up exams will only be available in cases of medical and/or family emergencies when the instructor receives an accommodation request from the Dean of Students office (please do not share your private medical information with your instructor), or for official academic activities (in which case the instructor should be contacted a minimum of two weeks in advance). The student is responsible for scheduling timely make-up exams with the instructor.

**E. Late Work**

Assignments should be submitted by the assigned deadline. Late work *may* be accepted, subject to a 20% penalty for every day it is late. For example, an assignment initially worth 10 points will be subject to a 2 point penalty if it is submitted up to 24 hours after the deadline, a 4 point penalty up to 48 hours, etc. Graded lecture and lab assignments should be submitted to the course website by the posted deadline, unless otherwise noted.

**F. Courtesy and Behavior**

Online forums are unfortunately prone to misunderstandings and inappropriate behavior. Please consult the document entitled “Netiquette Guidelines” in the Start Here section of the course for information on how to interact appropriately with peers in an online environment.

**G. Office Hours**

There are no official office hours. For help, consult section IX, C. below. If you cannot or should not seek help via the discussion boards, then you may contact Dr. Douglas directly through the Conversations tab in Canvas.

**H. Grammar**

Correct grammar, punctuation, spelling, capitalization and paragraphing should be used in any college level submission, including exams and typed reports. We will take note of spelling and grammar and we will grade accordingly.

## VIII. UF Policies

**A. Academic Honesty**

All students registered at the University of Florida have agreed to comply with the following statement:

*“I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University.”*

In addition, on all work submitted for credit the following pledge is either required or implied:

*"On my honor I have neither given nor received unauthorized aid in doing this assignment."*

Cases of plagiarism or other academic dishonesty will not be tolerated, and may result in grade penalties or other sanctions. If you have knowledge of any instances of academic dishonesty in this class, please notify the instructor or contact the Student Honor Court (392-1631) or Cheating Hotline (392-6999). For additional information on Academic Honesty, please refer to the University of Florida [Academic Honesty Guidelines](#).

**B. Accommodations for Students With Disabilities**

Students who will require a classroom accommodation for a disability must contact the Dean of Students Office of Disability Resources, in Peabody 202 (phone: 352-392-1261). Please see the [University of Florida Disability Resources website](#) for more information. Students should try to provide documentation of a requirement for accommodation to Dr. Douglas **as soon as possible**. No accommodations are available to students who lack this documentation, and accommodations are not retroactive. It is the policy of the University of Florida that the student, not the instructor, is responsible for arranging accommodations when needed. Once notification is complete, the Dean of Students Office of Disability Resources will work with the instructor to accommodate the student.

**C. Drop/Add/Withdrawal**

A student can drop/add during the drop add period with no penalty. After drop/add, a student who drops will receive a W until the date listed in the academic calendar. After that date, the student may be assigned an "E" (fail). Note: it is the responsibility of the STUDENT to withdraw from a course, not the instructor. Failure to participate/complete the class is NOT a drop.

**D. Teacher Evaluations**

Anonymous course evaluations will be open via UF's [online evaluations system](#) near the end of the semester; you will receive e-mail notifications of when the evaluations open.

## IX. Getting Help

**A. Computing Problems**

For issues with technical difficulties with Canvas, please contact the UF Help Desk at:

- [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu)
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

**B. University Support Services**

College can be a very stressful time in a person's life. Resources are available on campus to help students meet academic goals and solve personal problems, which may interfere with their academic performance. If you find that you are having difficulty emotionally or academically, there is substantial support available. See "A Self Help Guide for Students" or contact on of the following services:

1. UF Counseling and Wellness Center, Radio Rd Facility, 392-1575
2. Dean of Students Office, 202 Peabody Hall, 392-1261
3. Career Resource Center, Reitz Union, 392-1601
4. CLAS Academic Advising Center, Farrior Hall, 100 Fletcher Drive, 392-1521

**C. Other Questions**

If you have non-tech-support questions about other aspects of the course, check the following sources first to see if it is already answered, before e-mailing your instructors:

- o Course Syllabus
- o Course Announcements (this is the primary means that your instructor has to communicate with you in a timely manner)
- o Course FAQ Discussion Boards (See below)

If you have a **question about *course mechanics*** that cannot be answered from the syllabus or course announcements, please post it to the **Course Questions Discussion Board** on Canvas. **If you have a question regarding *course material*, post it to the discussion board entitled “Raise your hand”.** This board will remain active and available to everyone throughout the course, so you can ask, answer, and review questions asked by others. (Tip: check to see if your question has already been asked & answered!)

If you have a question involving a *personal or grade-related issue*, please e-mail your TA or Dr. Douglas, as appropriate.

## X. Assessments and Grading

### A. Course Structure

Final grades will be based on 2 midterm exams (20% each), several “lab” and other assignments to be completed (30% total), graded discussions (20%), and short end-of-module quizzes (10%).

### B. Evolution in the News

Each student is responsible for preparing a brief (5 min) narrated presentation summarizing a news item related to Evolution. A signup page will be made available early in the semester to allow students to specify which week they will present. Presentations could be produced in PowerPoint (with voice recorded using OfficeMix). Other formats may be considered, (i.e. AdobeSpark) if it is possible to upload a single stable link to your presentation. Once shared to your group, you will need to answer questions posed by your other group members who view your presentation. For additional details, see the Evolution in the News assignment.

### C. Grading

Minimum grade cutoffs are listed below. These cutoffs will not be raised; in other words, if you receive 93% of the possible points, you are guaranteed to earn an A grade. A curve may be applied to individual exams, depending on the class average, and will be communicated clearly. However, we will not adjust grades on an individual basis.

Point Range (%)	Letter Grade
≥ 90.00	A
≥ 86.66	A–
≥ 83.33	B+
≥ 80.00	B
≥ 76.66	B–
≥ 73.33	C+
≥ 70	C
≥ 66.66	C–
≥ 63.33	D+
≥ 60	D
≥ 56.66	D–
< 56.66	E

Note that the current UF policy for assigning grade points is available at the [undergraduate catalog web page](#).

Here is the point breakdown for each assignment, which corresponds to the percentages given above:

Graded items	Number of items	Points per item*	Total Points in category	Weighted Percentage of Grade
Exam 1	1	100	100	20%
Exam 2	1	100	100	20%
Weekly “lab” assignments	9	100	900	20%
Evolution in the news	1	100	100	10%
Graded Discussions	14	10	130	20%
Module quizzes	12	10	120	10%
				<b>100%</b>

**\*Note that the number of points assigned to each item & points in each category is for grading convenience only. The percentage of total points earned for each category *will be weighted* according to the percentages of the final course grade according to the values in the last column.**

**D. Incomplete (“I”)**

If a student has completed the majority of the course work with a passing grade and particular DOCUMENTED circumstances prevent completion of the course in the time allotted, the student may, with the agreement of the instructor, be assigned an “I” pending resolution of the grade. All incompletes MUST be resolved by the end of the following term or the student will receive a grade of “E” (failing)

**E. Special Treatment**

Please do not request individual special treatment regarding grading at the end of the semester; we do not adjust grades for individuals for any reason nor are grades rounded up. Plan to do well on all exams and other assignments from the beginning of the semester. If you are having difficulty in the class, please let your instructors know sooner rather than later.

**Disclaimer**

This syllabus represents the current plans and objectives; however, schedules, requirements, and assignments may change throughout the semester as the need arises. Such changes, communicated clearly, are not unusual and should be expected.