Instructors: Prof. Dale Lockwood and Prof. Mark P. Simmons

Teaching Assistants: Mr. Nathan Galloway and Ms. Skyler Griffin

Contact information:

NOTE: When sending an e-mail please include “BZ220” as part of the subject line so that we know which class it is from.

- Prof. Lockwood: 131 Johnson Hall; phone: 492-4070; e-mail: dale.lockwood@colostate.edu
- Prof. Simmons: E212B Anatomy / Zoology Building; phone 491-2154; e-mail: psimmons@rams.colostate.edu
- Mr. Galloway: E406 Anatomy/Zoology Building; phone 491-5744; e-mail: nathan.galloway@colostate.edu
- Ms. Griffin: E442 Anatomy/Zoology Building, phone: 491-6764; e-mail: skyler.griffin@colostate.edu

Office hours:

- Prof. Lockwood: Monday 10:00–12:00 AM, Tuesday 2:00–3:00PM (when teaching his half of the class)
- Prof. Simmons: Tuesday 2:00 – 3:00; Thursday 2:00 – 3:00 PM (when teaching his half of the class)
- Mr. Galloway: Wednesday 2:00 – 4:00 PM
- Ms. Griffin: Thursday 10:00 – 12:00 AM

Lecture: Tuesday / Thursday 12:30 – 1:45 PM; Behavioral Sciences A101

Recommended text:

[YES, A FIFTH EDITION WAS RELEASED IN 2013, BUT WE’RE TRYING TO SAVE YOU MONEY BY USING THE FOURTH EDITION]


Course web site: http://ramct.colostate.edu/

- Course number: BZ220 Introduction to Evolution
- Instructor: Mark P. Simmons

Objectives:
Students will be able to understand the process of descent with modification (i.e., evolution). This includes understanding the mechanisms by which lineages change (including heredity) and a general understanding of the history of life. Students will be able to make and test evolutionary hypotheses, for studies of both short-term change (microevolution) and studies of descent among species (macroevolution).

Grading:
We will be using the plus/minus system when assigning final grades. Plusses will be assigned for the highest two percentage points for a given letter grade for A, B, and C grades (e.g., 98-100% = A+). Minuses will only be assigned for grades that we choose to curve upwards (e.g., an 89.6% may be curved to an A- if the student actively participates in class, attends office hours, and turns in all problem sets). Note that it is university policy that C-, D+, and D- grades may not be assigned. As such, do not expect a high D to be changed into a C. All biology and zoology majors need at least a C in this class.

- Two in-class exams 20% (each)
- Cumulative final exam 25%
- Quizzes and discussion groups 25% (total; see below)
Fifty clicker questions 10% (total; see below)

- Download and check your grades on RamCT. You are responsible for ensuring the entered grade matches what was returned to you.
- There will be no opportunities for “extra credit.” Nor will there be any opportunities for “make ups” that aren’t well justified (i.e., university-excused absences).
- If you have questions regarding the grading of quizzes, discussion groups, or tests, you must resolve the issue within two weeks. For quizzes and discussion groups, contact the teaching assistant. For tests, e-mail the appropriate professor and justify why you believe your answer was correct.

Quizzes and discussion groups:
During the course of the semester there will be two discussion groups (each worth 10 points) and, most likely, 11 quizzes (the first is worth 5 points; all others are worth 10 points each). So, we anticipate that the quizzes-and-discussion-groups portion of your grade will be based on 125 available points. But the quizzes-and-discussion-groups portion of your course grade will only calculated out of 110 points. So, you can miss 15 points from your quizzes and discussion groups and still get 100% for this portion of your course grade.

All quizzes will be completed on RamCT. Please read and follow quiz instructions carefully as they will not be the same every time. **RamCT will automatically shut off quiz access after the due date and time (Fridays at 5 PM for the weeks we have quizzes, starting on the second week of class), so do not be late.** Each of you is individually responsible for knowing the material for the exams, and we expect you to use your own words for the discussion-groups writing assignments. You may work together with other students on the quizzes only.

Clicker questions:
We will be using iclickers in class. Starting August 28, we will be asking approximately two questions per lecture (50 questions over the semester). You will receive 0.25 points for participating by answering the question and an additional 0.5 points for a correct answer. You will receive up to 30 points for your iclicker responses (the 50 questions for the semester add up to 37.5 points, so you can effectively not answer any of 10 questions and still get full iclicker credit). In order to receive clicker question points, you must register your iclicker at [https://wsnet.colostate.edu/ewis262/clicker/registration.aspx](https://wsnet.colostate.edu/ewis262/clicker/registration.aspx), if you have not already done so. We ask that register your iclicker before August 30. We will use iclickers on August 28 as a test run, and you will begin accumulating clicker question points on August 30. You may work in groups in class to answer clicker questions. We have adopted clickers in response to student requests for more total points in the course and more opportunities to receive feedback on how well they know the material before exam time. The iclicker channel in Engineering 100 is DA. Note that iclicker questions will not be posted on RamCT.

Exam information:
- All exams are multiple-choice. Answer keys will be posted on the course web site.
- Last year’s test questions are provided on the web site.
- A review session will be scheduled before each preliminary exam as well as the final exam.
- The final exam is cumulative, but will emphasize the last four weeks of class that were not covered by the two preliminary exams. The second preliminary exam is not cumulative.
- **No electronics** are allowed on your desk or on you during exams (e.g., no earphones, no cell phones, no iPods, no MP3 players). You will be asked to remove or turn any hats, hoods or head coverings that prevent your eyes from being seen.
- If calculators are allowed for an exam, only calculators may be used (you may not use the calculator function on your MP3 player or cell phone).
- This course adheres to the Academic Integrity Policy of the General Catalog and the Student Conduct Code (http://tilt.colostate.edu/integrity/honorpledge/). The consequence of cheating on BZ220 exams or term papers (for honors students) is a failing class grade without the repeat/delete option, without being able to withdraw from the class, and permanent record of cheating on the CSU transcript.
- Deaths and births in the family do happen over the course of the semester. You’re welcome to make up the exam after attending a funeral or birth if you bring back a letter from the funeral home, physician, or other authority on appropriate letterhead. Likewise, signed excuses for university-sanctioned activities (competitions, events and professional meetings in which students are officially representing CSU) will be accepted. Make-up exams will be oral or short-answer essays.
Lecture / reading schedule:

August 26: Chapter 1: A case for evolutionary thinking: understanding HIV  
August 28: Flaws of “creation science” (Chapter 3, pp. 95-103)  
   Optional readings: Overton (1982) and Antolin and Herbers (2001) on course website

September 2: Chapter 2 through section 2.4: The evidence for evolution and Darwin’s ideas  
September 4: Chapter 3, sections 3.1-3.4: More evidence for evolution and Darwin’s ideas

September 9: Chapter 3 section 3.6, Chapter 9 through section 9.1: Mendel, heredity, and The Modern Synthesis  
September 11: Chapter 5, through section 5.3: DNA, the structure of genomes, and mutation  
   Additional reading: Genes.pdf on course web site

September 16: Chapter 5 section 5.4, Chapter 6 section 6.1 (skip box 6.2): Population genetics Hardy-Weinberg  
September 18: Chapter 3 section 3.5, Chapter 6, Pp. 182 – 197 (skip boxes 6.3, 6.5), Pp. 208 - 210: Natural Selection I

September 23: Chapter 6, Pp. 197 – 207 (skip box 6.8), Chapter 9, sections 9.3 through 9.6 (skip boxes 9.2, 9.3, 9.4):  
   Natural Selection II
September 25: Chapter 6, section 6.4(skip boxes), Chapter 7 Introduction and 7.1 (skip boxes): Mutation-selection  
   balance and migration

September 30: Chapter 7, section 7.2 (skip boxes): Genetic Drift  
October 2: Chapter 7, sections 7.4 and 7.5: Non-random mating and inbreeding depression

October 7: **FIRST PRELIMINARY EXAM (on material from August 26 – September 25)**

October 9: Evolutionary processes and conservation  
   Optional reading: Amos and Balmford (2001), paper on course web site

October 14: Chapter 12 (skip boxes): Kin selection  
October 16: Chapter 13: Life history evolution

October 21: Catch up day /Chapter 14 (skip boxes): Evolution and medicine  
October 23: Chapter 10: Studying adaptation

October 28: Chapter 11: Sexual selection  
October 30: Chapter 11: Sexual selection

November 4: Human sexual strategies  
   Optional reading: Buss and Schmitt (1993), on course website
November 6: Chapter 4: Estimating evolutionary trees part 1

November 11: Chapter 4: Estimating evolutionary trees parts 1 and 2  
November 13: **SECOND PRELIMINARY EXAM (on material from September 30 – November 6)**

November 18: Estimating evolutionary trees part 2; also group phylogenetic analysis  
November 20: Chapter 16: Mechanisms of speciation

December 2: Chapter 17: The origins of life  
December 4: Chapter 17: Precambrian evolution

December 9: Chapter 20: Human evolution part 1  
December 11: Chapter 20: Human evolution part 2

**FINAL EXAM:** Friday, December 19, from 9:40 AM – 11:40 AM in Behavioral Sciences A101  
   Do not make arrangements to leave CSU before this date!