Instructors: Prof. Colleen Webb and Prof. Mark P. Simmons

Teaching Assistants: Mr. Nathan Galloway and Ms. Keziah Katz

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. Webb: E334A Anatomy / Zoology Building; phone: 491-4289; e-mail: Colleen.Webb@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. Katz: E428 Anatomy/Zoology Building, phone: 491-5770; e-mail: kdkatz@rams.colostate.edu

Office hours:

- Prof. Webb: Tuesday 2:00–3:00 PM; Thursday 2:00-3:00 PM (when teaching her 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. Katz: Wednesday 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 2014, BUT WE’RE TRYING TO SAVE YOU MONEY BY USING THE FOURTH EDITION BASED ON 2014 STUDENT FEEDBACK]


Course web site: [http://info.canvas.colostate.edu/login.aspx](http://info.canvas.colostate.edu/login.aspx)

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% might 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 cannot 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   95 points (each)
Cumulative final exam   125 points
Quizzes and discussion groups  135 points (total; see below)
Fifty clicker questions  75 points (total; see below)
GRAND TOTAL:  525 points, but your final-grade percentage will be calculated from 500 points. For example, if you have 450 points at the end of the semester then 450 / 500 = 90% = “A” for your course grade.

- Check your scores on Canvas. You are responsible for knowing how you are doing in class.
- 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 from when the scores are posted. For quizzes and discussion groups, contact the teaching assistant who posted the assignment in question. 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 12 quizzes (the first is worth 5 points; all others are worth 10 points each). All quizzes will be completed on Canvas. Please read and follow quiz instructions carefully as they will not be the same every time. Canvas 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 September 1, we will be asking approximately two questions per lecture (50 questions over the semester). You will receive 0.5 points for participating by answering the question and an additional 1 point for a correct answer. In order to receive clicker points, you must register your iclicker at https://wsnet.colostate.edu/cwis262/clicker/registration.aspx, if you have not already done so. We ask that you register your iclicker before September 1. We will use iclickers on September 1 as a test run, and you will begin accumulating clicker points on September 3. 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 Behavioral Sciences A101 is CC. Note that iclicker questions will not be posted on Canvas.

Exam information:
- All exams are multiple-choice. Answer keys will be posted on the course web site.
- Last year’s test exams (and exam keys) 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 without memory/storage capability 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
Lecture / reading schedule:

August 25: Chapter 1: A case for evolutionary thinking: understanding HIV
August 27: Flaws of “creation science” (Chapter 3, pp. 95-103)
    Optional readings: Overton (1982) and Antolin and Herbers (2001), papers on course website

September 1: Chapter 2 through section 2.4: The evidence for evolution and Darwin’s ideas
September 3: Chapter 3, sections 3.1-3.4: More evidence for evolution and Darwin’s ideas

September 8: Chapter 3 section 3.6, Chapter 9 through section 9.1: Mendel, heredity, and The Modern Synthesis
September 10: Chapter 5, through section 5.3: DNA, the structure of genomes, and mutation

September 15: Chapter 5 section 5.4, Chapter 6 section 6.1 (skip box 6.2): Population genetics Hardy-Weinberg
September 17: Chapter 3 section 3.5, Chapter 6, Pp. 182 – 197 (skip boxes 6.3, 6.5), Pp. 208 - 210: Natural Selection I

September 22: 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 24: Chapter 6, section 6.4(skip boxes), Chapter 7 Introduction and 7.1 (skip boxes): Mutation-selection
    balance and migration

September 29: Chapter 7, section 7.2 (skip boxes): Genetic Drift
October 1: Chapter 7, sections 7.4 and 7.5: Non-random mating and inbreeding depression

October 6: FIRST PRELIMINARY EXAM (on material from August 25 – September 24)
October 8: Evolutionary processes and conservation

October 13: Chapter 12 (skip boxes): Kin selection
October 15: Chapter 13: Life history evolution

October 20: Catch up day /Chapter 14 (skip boxes): Evolution and medicine
October 22: Chapter 10: Studying adaptation

October 27: Chapter 11: Sexual selection
October 29: Chapter 11: Sexual selection

November 3: Human sexual strategies
    Optional reading: Buss and Schmitt (1993), paper on course website
November 5: Chapter 4: Estimating evolutionary trees part 1

November 10: Chapter 4: Estimating evolutionary trees parts 1 and 2
November 12: SECOND PRELIMINARY EXAM (on material from September 29 – November 5)

November 17: Estimating evolutionary trees part 2; also group phylogenetic analysis
November 19: Chapter 16: Mechanisms of speciation

December 1: Chapter 17: The origins of life
December 3: Chapter 17: Precambrian evolution

December 8: Chapter 20: Human evolution part 1
December 10: Chapter 20: Human evolution part 2

FINAL EXAM: Wednesday, December 16, from 9:40 AM – 11:40 AM in Behavioral Sciences A101
    Do not make arrangements to leave CSU before this date!