

Biology 4400: Evolution

(Section 002)

Professor: Dr. John Lytle

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Lectures: S135, 8:00-9:15am, Tuesdays & Thursdays

Final exam:

Thursday, Dec 14th at 8:30am

The final exam is comprehensive. It covers recent lectures (~50%) and also previous course material (~50%).

Grades: 100-90% =A
89.9-80% =B
79.9-67% = C
66.9-57% = D
<56.9 = F

Grades are not rounded

Missed exam:

A comprehensive exam is on the day of the final exam for students who missed an exam. This exam covers information from all 4 units. These are new questions without power point images.

Exams:

Bring on exam day:

1. Scantron 882E
2. Number 2 pencils & erasers

Note: You must put your full name on everything you submit for grading, or it will not be graded & it will receive a zero. Most students make this mistake only once!



	Approx. points:	# of each
Midterm Exams:	100	3*
Final Exam:	200	1
Quizzes & Activities:	10	10*
<u>Seminar Presentation:</u>	<u>60</u>	<u>1</u>
Approx. total*:	560	

***Note:** The lowest midterm exam & quiz scores will be dropped & not used for student grade assessment. (Except for zeroes earned from cheating! These will not be dropped)

Check your grade online on Blackboard often! When you see a mistake, get it corrected right away. **DO NOT** wait until the end of the semester.

Supplies:

Required:

Scantrons: 100 question: **882E**

Clickers: iClicker (used is fine)

Clickers must be registered on Blackboard

Text: **Biology Now** by Houtman, Scudellari, Malone, *Core Edition* (with online component)

Note: online component can be purchased separately: digital.wwnorton.com/bionowcore

Concepts of Biology Available free at: openstaxcollege.org/textbooks/concepts-of-biology

Recommended:

Pencil, ruler, good notebook, brain

Lectures: parts online on blackboard

Print out lectures before classes. If you miss a lecture, fill in blanks from another student & have them catch you up to speed.

Locating your professor:

JLytle1@CSUStan.edu

Office Hours: room N252, 9:05-11:30am, Mondays, Wednesdays, & Fridays (Please send email for appointment prior to visiting office hours)

Include **BIOL4400** in the subject of your emails when emailing me.

Weekly Quizzes

There will be an equivalent of a 10 question quiz each week. Some quiz questions will come in the format of clicker questions during lectures. The days the quizzes are held will not be announced ahead of time. Questions may include material covered in the past 2 lectures.

Seminar Presentation

Students will select groups in which they will present their findings on a topic of their choosing (relevant to evolutionary biology). Each team will review recent literature (bulk of which must be more recent than 2007) on their topic and assemble a seminar presentation lasting approximately 30 minutes. More assignment details will be posted on Blackboard.

Note: Be sure to take notes during your classmates' presentations. Material from these presentations may also appear on the exam.

Expected Learning Outcomes (from CSUS)

1. Students will be able to effectively interpret and communicate complex scientific ideas and findings relevant to evolution. Understanding will include recent peer-reviewed literature.
2. Students will be able to reconstruct the relevant historical background which led to the modern theory of evolution.
3. Students will be able to interpret phylogenies, relating current species to their evolutionary past.
4. Students will gain understanding of evolutionary processes that lead to the current forms of life and how its preservation relates to evolution.

Course Performance: To do well in this class, you must prepare by reading all required materials prior to lecture & lab. Ask questions about any concepts & materials you don't understand. Attend all lectures & take thorough notes. Expect to read, review, & study the lecture material (textbook chapters) & lecture notes several times to earn a passing grade. If you have trouble with the material, please e-mail/call/see me immediately.

This course covers a substantial amount of material over the semester, and you will be exposed to a great deal of new scientific terminology. There is a significant failure rate, mainly because students profoundly underestimate the course requirements and the level of difficulty on the exams. You should be prepared to devote 12 hours a week outside of class to studying for this course.

Attendance: Excessive absences from lecture will result in the student being dropped from the course. Arriving late, leaving early, and/or being removed from lecture due to disruptive behavior may be considered an absence (& may result in further disciplinary action).

Suggested Study Approach – Be an active student:

- Read textbook chapter
- Read end of chapter Summary
- Print and answer Study Guides (on Blackboard)
- Answer questions at the end of chapters
- Re-write/re-type your lecture & lab notes
- Come to office hours
- Learn how you learn! Then do whatever works best for you.
- Review/Study often (short daily study sessions are best vs. long infrequent study sessions - This is the best way to learn new material of any kind)
- Form/join a study group!

Proverb:

“He who asks a question is a fool for a minute; he who does not ask remains a fool forever”.



There is help on campus for students struggling with biology! The Central Valley Math & Science Alliance, located in 124 Naraghi Hall, is a free walk-in science and math tutoring center that does not require appointments. With both student and faculty tutors available from 8am – 6pm daily, there should be someone available to answer your questions. The Biology Club is a group of students who have gone through general biology courses and they are willing to offer advice and help, especially if you buy them coffee or bring them cookies. Tutoring Services on the ground floor of the CSUS Library (L-112) has drop-in tutoring for biology; check their office or website for their schedule. The Advising Resource Center, Student Support Services and the Program for Academic and Career Excellence (P.A.C.E.) in the MSR Building may be useful sources of aid for you. Of course, I will work hard to help you in class and out. Come to office hours, communicate with me and let me know your frustrations and I will respond.

Make-Ups: No make-up quizzes will be given. Make-up exams will only be permitted for valid documented reasons **and** with approval of the instructor. Additionally, the instructor **must be notified within 24 hours** of the exam that is missed for any make-up to be considered.

Make-up exams are to be scheduled at the prerogative of the instructor.

Academic Integrity: Dishonesty & Cheating:

Academic dishonesty defrauds all those who depend upon the integrity of the college, its courses, its certificates & degrees. Students are expected to follow ethical standards & policies at CSUS. These standards & policies will be strictly enforced in this course. Any student caught violating the academic integrity policies will receive a **zero** on the exam/quiz/assignment/etc. in question, will lose any Extra Credit points earned, & may be dropped and/or receive an **F** in the course. Additionally, students may face further disciplinary action & consequences as described in the CSUS Catalog.

Classroom/Laboratory Conduct: Policy on Cell Phones, iPhones, PDAs, Electronic Devices, etc.: Please be courteous & respectful of your instructor & your fellow classmates by **turning off** any cell phones, iPhones, etc., prior to coming to class. Use of these devices (e.g., texting) is not allowed in class. **Note:** During exams, quizzes, etc., the use of electronic devices (cell phones, iPods, etc.) is not permitted. Any student caught using electronic devices will receive a **zero** on the exam/quiz/assignment/etc. in question, & may receive an **F** in the course.

Note: Talking and/or whispering during quizzes, exams, etc., will be considered a

violation of the academic integrity (i.e., dishonesty and/or cheating). Students may be moved prior to and/or during quizzes, exams, etc. if talking and/or whispering occurs.

Disruptive behavior: Disruptive behavior may result in students being removed from lecture/lab and/or dropped from the course (this includes use of electronic devices as mentioned above). Additionally, students may face further disciplinary action & consequences as described in the CSUS Catalog.

Special Conditions: Please contact me if you have any special needs that need to be addressed in order for you to perform well in this course. Please register with the DRS *prior* to the week before an exam in order to set up necessary accommodations. **Note:** There are numerous resources available to help students at CSUS. Please feel free to seek help for tutoring, guidance, counseling, health care, etc., during your time at CSUS.

Note: Course Syllabus and/or Course Schedule are subject to change as needed to meet the course objectives. Any changes will be announced in class & be distributed to the students (i.e., posted on Blackboard).

BIO-4400 Tentative Course Schedule

Week #: <i>Start date</i>	Lecture Topic	Readings & Homework
1: 8/21	Introduction & Syllabus	
2: 8/28	History of Evolution Phylogenetics	Ch. 1 & 2
3: 9/4	Phylogenetics Phylogenetic Activity	Ch. 4 & 5
4: 9/11	Natural Selection Population Genetics	Ch. 3 & 7
5: 9/18	Exam #1 (Thursday) Speciation	Ch. 14
6: 9/25	Speciation Finite Population Evolution	Ch. 8
7: 10/2	Finite Population Evolution Nova: Great Transformations	Ch. 12
8: 10/9	Fossil Record	Ch. 11 & 12
9: 10/16	Fossil Record Nova: Where Did We Come From?	Ch. 12 & 15
10: 10/23	Exam #2 (Tuesday) Evo Devo	Ch. 13
11: 10/30	Evo Devo Coevolution	Ch. 13 & 19
12: 11/6	Coevolution Nova: Evolutionary Arms Race	Ch. 19
13: 11/13	Evolution of Sex Nova: Why Sex?	Ch. 16 & 17
14: 11/20	Exam #3 (Tuesday) No Class Thursday	
15: 11/27	Student Presentations	
16: 12/4	Student Presentations	
17: 12/11	No Class Tuesday Final Exam (Thursday, December 14th at 8:30am)	