

EVOLUTION
BIOL3321 CRN 21042
SPRING 2022

INSTRUCTOR:

Dr. Michael Moody, B306 Biology Building, 747-5087, mlmoody@utep.edu

COURSE MEETING

Lecture: MW 1:30-2:50 (UGLC116)

TEXTBOOK (REQUIRED):

- Freeman, Scott, and Jon C. Herron. 2014. *Evolutionary Analysis*. 5th Edition. Pearson Prentice Hall, NJ.

COURSE OBJECTIVES:

- Define biological evolution and understand the rise of modern evolutionary biology
- Know what conditions are required for natural selection to operate
- Understand natural selection, including the models and events that shape molecular evolution
- Apply quantitative genetics to evolutionary biology
- Define adaptations, how they evolve, and understand at what level selection is operating
- Define and understand phylogenetic theory and how to assess phylogenies
- Differentiate between species concepts and understand the mechanistic hypotheses for speciation

Grading:

Quizzes (drop 2)	(15%)
iClicker (drop 4)	(10%)
SimBio	(15%)
<u>EXAMS 1-4</u>	<u>(60%)</u>
Total for students:	100%

Exams will all be taken in class using the Respondus Browser you will need a computer or tablet in class for the exams (see schedule for all exams and quizzes in this syllabus below).

Grades will be assigned as: 90+% = A, 80-89% = B, 70-79% = C, 60-69% = D, <60% = F.

POLICY ON COVID SAFETY:

- **Please stay home if** not feeling well and/or you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, so that we can work on appropriate accommodations. **If you have tested positive for COVID-19 DON'T COME TO CAMPUS**, you are encouraged to report your results to covidaction@utep.edu, so that the Dean of Students Office can provide you with support and help with communication with your professors. The Student Health Center is equipped to provide COVID-19 testing.
- The Center for Disease Control and Prevention recommends that people wear face masks when indoors in groups of people.
- **GET VACCINATED is highly encouraged**. If you still need the vaccine, it is widely available in the El Paso area. For more information about the current rates, testing, and vaccinations, please visit www.epstrong.org.

POLICY ON MAKE-UP EXAMINATIONS: No make-up exams will be given for reasons other than **extreme illness (doctor's note required)**, absence with the instructor's prior approval, or when a student is on official University business (**documentation required**). Make-up exams will be scheduled at the Instructor's convenience.

POLICY ON ACADEMIC HONESTY: Academic Dishonesty will not be tolerated. It includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. **Respondus requirements for exams will be strictly upheld and if rules are not followed students will be referred to the Dean of Students**. If you have any questions regarding the university policy on scholastic dishonesty please contact the Dean of Students.

PARTICIPATION POLICY: Regular participation will be necessary for success in this class.

POLICY OF ONLINE BEHAVIOR: Any student who disrupts or uses inappropriate online behavior will be warned and/or referred to the Dean of Students.

DISABILITY STATEMENT: If you have a disability and need accommodations, please contact: The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass.

MILITARY STATEMENT: If you are a military student with the potential of being called to military service and /or training during the course of the Summer I sessions, you are encouraged to contact me at the beginning of the summer.

Date		Lecture Topic	Instructor - Chapter(s)
WEEK 1	19-Jan	Wed	Syllabus & Introduction to Evolution
WEEK 2	24-Jan	<i>Mon</i>	Genetic Variation & Evolutionary Change
	26-Jan	Wed (Quiz 1)	GV & EC cont'd; Hardy-Weinberg Principle
WEEK 3	31-Jan	<i>Mon</i>	Hardy-Weinberg Principle – Selection & Mutation
	2-Feb	Wed (Quiz 2)	Migration, Genetic Drift
WEEK 4	7-Feb	<i>Mon</i>	SIMBIO – Work Time
	9-Feb	Wed	Genetic Drift & Molecular Evolution – Non-random Mating
WEEK 5	14-Feb	<i>Mon</i>	EXAM 1
	16-Feb	Wed	Linkage Disequilibrium & Evolution of Sex
WEEK 6	21-Feb	<i>Mon</i>	Quantitative Traits and Selection; Natural Selection
	23-Feb	Wed (Quiz 3)	Quantitative Traits and Selection; Natural Selection
WEEK 7	28-Feb	<i>Mon</i>	Sexual selection
	2-March	Wed (Quiz 4)	SIMBIO – Work Time
WEEK 8	7-March	<i>Mon</i>	Adaptation Testing I
	9-March	Wed	EXAM 2
WEEK 9	14-Mach	<i>Mon</i>	SPRING BREAK - NO CLASS
	16-Mach	Wed	SPRING BREAK - NO CLASS
WEEK 10	21-March	<i>Mon</i>	Evolutionary Trees & Tree thinking
	23-March	Wed	Evolution & Human-pathogen interaction
WEEK 11	28-March	<i>Mon (Quiz 5)</i>	Mechanisms of Speciation
	30-March	Wed	Mechanisms of Speciation
WEEK 12	4-April	<i>Mon (Quiz 6)</i>	SIMBIO – Work Time
	6-April	Wed	Genome Evolution
WEEK 13	11-April	<i>Mon</i>	EXAM 3
	13-April	Wed	The Origins of Life
WEEK 14	18-April	<i>Mon</i>	The Origins of Life
	20-April	Wed (Quiz 7)	Evolution and the Fossil Record
WEEK 15	25-April	<i>Mon</i>	Evolution and the Fossil Record
	27-April	Wed (Quiz 8)	Human Evolution
WEEK 16	2-May	<i>Mon</i>	Predicting Evolution
	4-May	Wed	Study Day
FINALS	TBA	TBA	EXAM 4

