

**EVOLUTION
BIOL3321 CRN 21147
SPRING 2021**

INSTRUCTOR:

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

COURSE REQUIREMENTS AND ASSIGNMENTS:

Blackboard Modules – Weekly Minilectures; Readings; Quizzes; SimBio

COURSE MEETING

Synchronous Exams: 10:30 am -11:50 am – Mon. Feb 10, Wed. Mar 10, & Mon. Apr 12

Synchronous Final Exam (not cumulative): 10 am – 12 noon - Fri. May 14

Synchronous Office Hrs: Wednesdays 10:30 am - 11:30 am ***Also by appointment**

TEXTBOOK (REQUIRED):

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

COURSE OBJECTIVES:

- Define biological evolution and discuss the rise of modern evolutionary biology
- Apply genetics to 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 one)	(15%)
SimBio	(10%)
<u>EXAMS 1-4 (drop one)</u>	<u>(75%)</u>
Total for students:	500 pts

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

POLICY ON MAKE-UP EXAMINATIONS: No make-up exams will be given. You will be allowed to drop your worst exam grade. If you are ill or are in a situation where you need to miss an exam, this will be considered your worst exam grade. So, there will be no make-up exams.

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.

OTHER IMPORTANT DATES

- March 26 – Cesar Chavez Day
- April 1 – Drop Deadline
- April 2 – spring study day
- May 6 – last day class

	Date		Lecture Topic	Instructor - Chapter(s)
WEEK 1	20-Jan	<i>Mon</i>	Syllabus & Introduction to Evolution	Chapters 2 (37-55)
	25-Jan	Wed	Genetic Variation & Evolutionary Change	Chapter 5 (148-174)
WEEK 2	27-Jan	<i>Mon (Quiz 1)</i>	Hardy-Weinberg Principle	Chapter 6 (179-201)
	1-Feb	Wed	Hardy-Weinberg Principle – Selection & Mutation	Chapter 6 (201-221)
WEEK 3	3-Feb	<i>Mon (Quiz 2)</i>	Migration, Genetic Drift	Chapter 7 (234-259)
	8-Feb	Wed	Genetic Drift & Molecular Evolution – Non-random Mating	Chapter 7 (260-284) SIMBIO - sickle cell alleles – Due Wednesday
WEEK 4	10-Feb	<i>Mon</i>	EXAM 1	EXAM 1
	15-Feb	Wed	Linkage Dis EQ & Evol. Sex	Chapter 8 (292-307; 314-325)
WEEK 5	17-Feb	<i>Mon</i>	Quantitative traits and Selection	Chapter 3 (73-97)
	22-Feb	Wed (Quiz 3)	Selection II – Natural Selection	Chapter 9 (329-350)
WEEK 6	1-March	<i>Mon</i>	Selection III – Natural Selection	Chapter 9 (350-364)
	3-March	Wed (Quiz 4)	Selection III – Sexual selection	Chapter 11 (407-447) SIMBIO – Evolution for Ecology – Due Friday
WEEK 7	8-March	<i>Mon</i>	Adaptation Testing I	Ch. 10 (369-378); Ch. 13 (491-495, 513-522)
	10-March	Wed	EXAM 2	EXAM 2
WEEK 8	15-Mach	<i>Mon</i>	SPRING BREAK - NO CLASS	SPRING BREAK - NO CLASS
	17-Mach	Wed	SPRING BREAK - NO CLASS	SPRING BREAK - NO CLASS
WEEK 9	22-March	<i>Mon</i>	Evolutionary Trees & tree thinking	Chapter 4 (111-128; 134-140)
	24-March	Wed	Evolutionary & Human-pathogen interaction	Chapter 14 (535-552)
WEEK 10	29-March	<i>Mon (Quiz 5)</i>	Mechanisms of Speciation	Chapter 16 (609-614; 616-620)
	31-March	Wed	Mechanisms of Speciation	Chapter 16 (621-640) SIMBIO – Biogeography – Due Friday
WEEK 11	5-April	<i>Mon (Quiz 6)</i>	Genome Evolution	Chapter 15 (581-585; 591-606)
	7-April	Wed	Adaptation Testing II	Chapter 10 (382-401)
WEEK 12	12-April	<i>Mon</i>	EXAM 3	EXAM 3
	14-April	Wed	The Origins of Life	Chapter 17 (645-683)
WEEK 13	19-April	<i>Mon</i>	The Origins of Life	Chapter 17 (645-683)
	21-April	Wed (Quiz 7)	Evolution and the Fossil Record	Chapter 18 (692-730)
WEEK 14	26-April	<i>Mon</i>	Evolution and the Fossil Record	Chapter 18 (692-730)
	28-April	Wed (Quiz 8)	Human Evolution	Chapter 20 (769-802)
WEEK 15	3-May	<i>Mon</i>	Predicting Evolution	Supplemental
	5-May	Wed (Quiz 9)	Study Day	
WEEK 16 FINALS	14-May	Fri (10am – 12 noon)	EXAM 4	EXAM 4

