

**EVOLUTION**  
**BIOL3321 CRN 20789**  
**SPRING 2023**

**INSTRUCTOR:**

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

**COURSE MEETING**

**Lecture:** MW 1:30-2:50 (PSCI 115)

**TEXTBOOK (REQUIRED):**

- Freeman, Scott, and Jon C. Herron. 2014. *Evolutionary Analysis*. 5<sup>th</sup> 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 5)	(10%)
SimBio	(15%)
<u>EXAMS 1-4</u>	<u>(60%)</u>
<b>Total for students:</b>	<b>100%</b>

**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](mailto: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.
- **GET VACCINATED is highly encouraged.** If you still need the vaccine or boosters, it is widely available in the El Paso area. For more information about the current rates, testing, and vaccinations, please visit [www.epstrong.org](http://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](mailto: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](http://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)
<b>WEEK 1</b>	18-Jan	<b>Wed</b>	Syllabus & Introduction to Evolution
<b>WEEK 2</b>	23-Jan	<i>Mon</i>	Genetic Variation & Evolutionary Change
	25-Jan	<b>Wed (Quiz 1)</b>	GV & EC cont'd; Hardy-Weinberg Principle
<b>WEEK 3</b>	30-Jan	<i>Mon</i>	Hardy-Weinberg Principle, Genetic Drift
	1-Feb	<b>Wed (Quiz 2)</b>	Migration, Genetic Drift
<b>WEEK 4</b>	6-Feb	<i>Mon</i>	<b>SIMBIO – Work Time</b>
	8-Feb	<b>Wed</b>	Genetic Drift & Molecular Evolution – Non-random Mating
<b>WEEK 5</b>	13-Feb	<i>Mon</i>	<b>EXAM 1</b>
	15-Feb	<b>Wed</b>	Linkage Disequilibrium & Evolution of Sex
<b>WEEK 6</b>	20-Feb	<i>Mon</i>	Quantitative Traits and Selection; Natural Selection
	22-Feb	<b>Wed (Quiz 3)</b>	Quantitative Traits and Selection; Natural Selection
<b>WEEK 7</b>	27-Feb	<i>Mon</i>	Sexual selection
	1-March	<b>Wed (Quiz 4)</b>	Adaptation Testing I
<b>WEEK 8</b>	6-March	<i>Mon</i>	<b>SIMBIO – Work Time</b>
	8-March	<b>Wed</b>	<b>EXAM 2</b>
<b>WEEK 9</b>	13-Mach	<i>Mon</i>	<b>SPRING BREAK - NO CLASS</b>
	15-Mach	<b>Wed</b>	<b>SPRING BREAK - NO CLASS</b>
<b>WEEK 10</b>	20-March	<i>Mon</i>	Evolutionary Trees & Tree thinking
	22-March	<b>Wed</b>	Evolution & Human-pathogen interaction
<b>WEEK 11</b>	27-March	<i>Mon (Quiz 5)</i>	Mechanisms of Speciation
	29-March	<b>Wed</b>	Mechanisms of Speciation
<b>WEEK 12</b>	3-April	<i>Mon (Quiz 6)</i>	Genome Evolution
	5-April	<b>Wed</b>	<b>SIMBIO – Work Time</b>
<b>WEEK 13</b>	10-April	<i>Mon</i>	<b>EXAM 3</b>
	12-April	<b>Wed</b>	The Origins of Life (online modules)
<b>WEEK 14</b>	17-April	<i>Mon</i>	The Origins of Life
	19-April	<b>Wed (Quiz 7)</b>	Evolution and the Fossil Record
<b>WEEK 15</b>	24-April	<i>Mon</i>	Evolution and the Fossil Record
	26-April	<b>Wed (Quiz 8)</b>	Human Evolution
<b>WEEK 16</b>	1-May	<i>Mon</i>	Study Day
	3-May	<b>Wed</b>	<b>EXAM 4</b>

