ADVANCED EVOLUTIONARY THEORY
BIOL5322 CRN 28402
SPRING 2019

Course Description –
The class covers advanced topics in evolutionary biology, with a strong focus on population genetics. The course will consist of a formal lecture a week, followed by a session devoted to discussions of current literature through student presentations or computer labs. The target audience is graduate students concentrating in evolutionary biology, as well as individuals from other fields (molecular biology, bioinformatics, etc.) with an interest in evolution and population genetics.

Class Meetings
M, W 3:00-4:20 CRBL 304

Instructors –
Michael Moody, B306 Biology Building, mlmoody@utep.edu
Liz Walsh, B218 Biology Building, ewalsh@utep.edu

Office hours by appointment

Textbook –
Required: None, reading from the literature will be assigned
Recommended references: Population Genetics, A Concise Guide by John Gillespie, Evolutionary Theory by Sean Rice, Evolutionary Genetics (2d Edition), by John Maynard Smith

Prereguisites - It is assumed that all students have had introductory undergraduate level courses in genetics and in evolutionary biology. While mathematics will be used in the class, virtually all of it will be at the level of high school algebra and elementary (first semester) calculus and statistics.

Grades

Pre-Discussion Quizzes	15
Participation	15
Labs & assignments	15
Midterm	20
Final	20
Discussion leader	15

COURSE POLICIES

POLICY ON MAKE-UP EXAMINATIONS: No make-up exams will be given for reasons other than 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. If you have any questions regarding the university policy on scholastic dishonesty please contact the Dean of Students.

POLICY ON ELECTRONIC DEVICES: Be courteous to your fellow students and lecturer. Turn off any cell phones, smart phones, Blackberries, etc. during lecture. You cannot text, surf the internet, watch movies, listen to music, etc. in class.

ATTENDANCE POLICY: Regular attendance will be necessary for success in this class.

POLICY ON DISRUPTIVE BEHAVIOR: Any student who disrupts the class will be asked to leave and will be referred to the Dean of Students.

DISABILITY STATEMENT: If a student has or suspects he/she has a disability and needs an accommodation, he/she should contact the Center for Accommodation and Support Services (CASS) at 747-5148 or at cass@utep.edu or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any CASS accommodation letters and instructions.

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 semester, you are encouraged to contact me at the beginning of the semester.

Advanced Evolutionary Theory Schedule

Week of	Topic	Instructor
Jan 21	Pop gen H-W review	Walsh
Jan 28	Pop gen H-W review cont'd/assignment	Walsh
Feb 4	Allele frequency & Fst/lab	Walsh
Feb 11	Neutral Theory/discussion	Walsh
Feb 18	Genetic Drift/lab	Walsh
Feb 25	Selection/discussion	Walsh
Mar 4	Evolution of sex/discussion	Walsh
Mar 11	Mating Systems**/ Midterm exam**	Walsh
Mar 18-22	Spring Break	
Mar 25	Models of migration/Gene Flow/discussion	Moody
Apr 1	Speciation-Allopatric/discussion	Moody
Apr 8	Speciation-Sympatric & hybrid/discussion	Moody
Apr 15	Phylogenetics/Phylogenetics lab	Moody
Apr 22	Phylogenetics/discussion	Moody
Apr 29	Macroevolution/discussion	Moody
May 6	Genomics/discussion	Moody
TBA	**Final Exam (not cumulative)**	