

ORGANISMAL BIOLOGY

Course Syllabus for BIOL 1306, Spring 2017

Instructor: Dr. Michael Moody (mlmoody@utep.edu)

Scheduled Class Time and Room

Monday and Wednesday 9:00-10:20am, Classroom: UGLC 346

Office Hours: Wednesday 11:00-12:00.

If you cannot make this times, email me and we can schedule an appointment. Please include the reason that you cannot make normal office hours.

Required Text: Hillis DM (2014) *Principles of Life*. Sinauer Associates/MacMillan, Sunderland, MA. ISBN: 978-1-4641-0947-8

Topical Outline

- 1) Evolution
- 2) Diversity
- 3) Plants
- 4) Animals
- 5) Ecology

Course Objectives: Understand the role of evolution and ecology in: (i) interactions among organisms and their environments, (ii) diversity of life on Earth, and (iii) physiology of organisms.

Learning Outcomes: After completing this course, you should be able to:

- 1) Explain how evolution and ecology drive the diversity of life on Earth.
- 2) Identify major organismal lineages and know important biology about them.
- 3) Interpret phylogenetic trees showing relationships among lineages.
- 4) Describe key structural and physiological features in plants and animals.
- 5) Match adaptations of organisms to Earth's major biomes and ecosystems.
- 6) Analyze biological systems on a variety of scales, from organism to global.
- 7) Master biological concepts using written and lecture materials.
- 8) Understand and correctly use scientific vocabulary related to organismal biology.

Grading: Course grades will be based on four exams, worth **20 points each**, participation (mostly polling, access REEF polling system, <http://admin.utep.edu/Default.aspx?tabid=74573>) worth **15 points**, and a final worth **25 points**. I will drop your worst exam grade, **with the exception of the final exam grade, which cannot be dropped**. Due to this policy, there are no makeup exams. **I will also drop your 5 worst REEF scores.** Tests are multiple choice. There will be NO extra credit.

Grading Scale: You will be assigned a letter grade for the course on the following scale: A: 90-100; B: 80-89; C: 70-79; D: 60-69; F: Less than 60.

Attendance: If you miss a class, it is your responsibility to obtain any class notes or pertinent information from a fellow student. Regular attendance will be necessary for success in this class.

Academic dishonesty: Academic Dishonesty will not be tolerated. It includes, but is not limited to, cheating, plagiarism, collusion, 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.

Disability Statement: If you have a disability and need classroom 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.

Labs: Biol 1108 is designed to help you learn how science is done and to introduce you to some of the biodiversity we will cover in lecture. However, the lecture and the lab are independent classes, and the topics do not sync up completely. You will likely be learning about some organisms in lab before we cover them in lecture. Ideally lecture and lab will reinforce each other.

Schedule of Topics

#	DATE	TOPIC	CHAPTER
	January 18	Introduction & Syllabus	
	January 23	Evolution – Evolution & Natural Selection	15
	January 25	Evolution – Genetic Variation and Evolution of Populations	15
	January 30	Evolution – Speciation & Extinction	17
	February 1	Evolution - Phylogenetics – Cladograms – Building Trees	16
	February 6	Evolution – History of Life	18
	February 8	EXAM 1	
	February 13	Diversity – Bacteria, Archaea and Viruses	19
	February 15	Diversity – Protists	20
	February 20	Diversity – Animals - Insects and other Protostomes	23
	February 22	Diversity – Animals - Vertebrates and other Deuterostomes	23
	February 28	Diversity – Fungi	22
	March 1	EXAM 2	
	March 6	Diversity – Plants	21
	March 8	Plants – Anatomy	24
	March 13-17	SPRING BREAK	
	March 20	Plants – Biochemistry and Growth	26, 27
	March 22	Plants – Physiology	25
	March 27	Plants – Environmental and Human Impact	28
	March 29	EXAM 3	
	April 3	Animals – Metabolism, Digestion, Nutrition	29, 30
	April 5	Animals – Circulation, Osmoregulation	31, 32
	April 10	Animals – Hormones , Reproduction	35, 36, 37
	April 12	Animals – Neuroscience, Biomechanics	34, 33
	April 17	Animal Behavior	40
	April 19	EXAM 4	
	April 20	Ecology – Populations and Species Interactions	42, 43
	April 24	Ecology – Communities, Biodiversity, and Succession	44
	April 26	Ecology – Ecosystems and Biomes	41
	May 1	Ecology – Global Ecology	45
	May 3	<i>Final review</i>	
	May 10	CUMULATIVE FINAL EXAM (10-12:45)	