

**TENTATIVE SYLLABUS**  
**BIOL 1306-005; CRN 11238**  
**ORGANISMAL BIOLOGY**  
**Fall 2021**

Tuesday and Thursday 10:30–11:50; Undergraduate Learning Center 216

**Instructor:**

Markus J. Peterson, Biology 406

Phone: 915-747-5354

Email: [mjpeterson@utep.edu](mailto:mjpeterson@utep.edu)

Discussion board threads associated with the class on Blackboard

**Office Hours:**

Tuesdays 1:00–2:20p. Please schedule via email during this period.

**Course Description:**

Organismal Biology addresses the principles of structure and function at the organismal level, including a survey of biodiversity in plants, animals, and microorganisms.

**Prerequisites:**

Study of Life (BIOL 1107) and Intermediate Algebra (MATH 0311), each with a “C” or better.

**Course Objectives:**

Understand how evolution drives: (1) diversity of life on Earth, (2) ecological interactions among organisms and their environments, and (3) structure and function of organisms.

**Required Text:**

Instead of a traditional textbook, we will use the CogBooks platform. You can either purchase a code at the UTEP bookstore or pay for CogBooks online when you begin our course on Blackboard using the link to CogBooks through our Blackboard shell. Once logged in for the first time, a Payment Gateway Process screen will appear, and students will be asked to either enter a code (purchased from the bookstore) or purchase the CogBooks courseware. Once students have purchased or entered a code, they will then have access to the CogBooks courseware for the entire semester.

CogBooks is not a textbook. It is software that guides students through various readings and activities that cover concepts and materials in our course. There is a tutorial video for navigating in CogBooks here: <https://youtu.be/QGiTUT8ohh8>.

**Topical Outline:**

1. Evolution and phylogenetics
2. Biological diversity
3. Plant structure and function
4. Ecology
5. Animal structure and function

**Learning outcomes – Concepts:**

1. Describe how Darwin convinced the scientific community of the importance of evolution. More broadly, understand how scientific knowledge is generated by achieving consensus among different types of evidence.
2. Explain how evolution drives life on Earth at small and large scales.
3. Identify major groups of organisms within the tree of life and describe its structure. Be able to reason about the evolutionary history of a group including determination of traits in ancestral lineages.
4. Explain the principles of anatomy and physiology in plants and animals.
5. Describe how organisms interact with each other and with their environment.

**Learning outcomes – Skills:**

1. Gain improved proficiency in reading graphs, interpreting mathematical equations, and interpreting box and arrow diagrams depicting biological phenomena.
2. Be able to interpret phylogenetic trees showing relationships among lineages.
3. Master ~200 biology vocabulary terms.
4. Learn about biological inquiry, both in how scientists apply it, and in how to ask questions about biological knowledge.

**Grading:**

Your grade will be determined using three sources: (1) CogBooks modules (25%), (2) class participation (including attendance; 25%), and exams (50%).

**CogBooks Modules:** Each week, you will have several CogBook submodules designed to increase your familiarity with new material and must be completed before class. These assessments are posted on Blackboard but are linked through your purchase of CogBooks. The modules will have you conduct activities and ask questions to determine if you feel comfortable with the topics. The CogBooks software will walk you through this process and will make recommendations for where to go for review if you are not comfortable with the material. This is not graded on a performance scale; instead you either earn credit for doing it or you do not. You will only receive full credit for the assessment if you complete them at the indicated time. Late submissions will NOT be accepted.

**Class Participation:** Activities during classes include lecture, Q&A, clarification of concepts, discussion of interesting topics or examples, and some interactive questions. The questions are mainly meant to be instructional, with points for participation and no penalty for incorrect answers. There is no way to make up missed classes; however, I will automatically excuse two classes for all students. You do not need to explain why you missed class.

**Exams:** All students will take four (4 ~30-question multiple choice exams (12.5 course percentage points each; the lowest exam will be dropped, for a total of 37.5 points). Because the lowest exam will be dropped, **there are no makeup exams**. These exams will be open-book, timed blackboard exams that will be available for several days. You can start the exam any time within the window, but once you begin, there will be a set time (for example, 60 minutes) to finish. **The mandatory closed book final will be taken in person during the final exam period.**

**Grading Scale:**

<i>Scale:</i>	90-100%	= A	<i>Point Distribution:</i>	CogBooks Modules	25%
	80-89%	= B		Class Participation	25%
	70-79%	= C		Exams	50%
	60-69%	= D			
	<60%	= F			

**Important UTEP Dates:**

23 August	First day of fall semester classes
23–27 August	Late registration
24 August	First day BIOL-1306
06 September	Labor Day holiday
08 September	Fall Census Day
29 October	Fall drop/withdrawal deadline
12 November	Deadline to submit candidates' names for degree conferral
25–26 November	Thanksgiving holiday
02 December	Last day of classes
03 December	Dead day
09 December	Final exam period—10:00–12:45
11–12 December	Commencement

**Expectations:**

- Attend *every* class; there is no room for random absences because each lecture builds on previous work. **Attendance for the entire class period will form part of your class participation grade.**

- Be on time. I expect you to be in your seat when the class *begins*. **Punctuality will form part of your class participation grade.**
- Complete assigned materials *before* class. **This preparation, as evidenced by your participation in class, will form part of your class participation grade.**
- Participate in all class discussions (see above).

### **Official UTEP Novel Coronavirus Precaution Statement**

Please stay home if 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, 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.

The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit <https://www.epstrong.org/>.

### **Academic Integrity:**

Academic dishonesty is prohibited and considered a violation of the UTEP *Handbook of Operating Procedures*. 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. More information on academic dishonesty can be found at <http://academics.utep.edu/Default.aspx?tabid=23785>. All forms of academic dishonesty will be reported and result in the allocation of an automatic failing final grade in this course.

### **Civility:**

Students are expected to conduct themselves in a professional manner in class. Text messaging and the use of cell phones while lectures are in progress will not be tolerated. Students should voice concerns to me via email.

### **Disabilities:**

If a student has or suspects s/he has a disability that needs accommodation, s/he should contact Center for Accommodations and Support Services (CASS) office at 915-747-5148 or [cass@utep.edu](mailto:cass@utep.edu), or go to Room 106 Union East Building. Students are responsible for presenting me with any CASS accommodation letters and instructions.

### **Military Statement:**

If you are in the military and anticipate deployment, contact me as soon as possible.

### **Need help with academic, career, or personal issues? These people will help.**

University Counseling Center	202 Union West	747-5302
Center for Accommodations and Support Services	106 Union East	747-5148
University Career Center	103 Union West	747-5640

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**BIOL 1306**  
**ORGANISMAL BIOLOGY**  
**Fall 2021**

MONTH	DATE	TOPIC	No. <sup>1</sup>	CogBooks module name & due date
August	24	Introduction, syllabus		
	26	Evidence of evolution	1.1	Evolution
September	31	Micro- and Macroevolution	1.2	Evolution of Populations
	2	"	1.3	Evolution in Populations
	7	"	1.4	New Species
	9	Phylogenetics	1.5	Phylogenies and the History of Life
	14	"		
	16	" <b>Exam 1</b>		
	21	Animal diversity	2.1	Animal Diversity
October	23	"		
	28	Microbial diversity	2.2	Prokaryotes: Archaea & Bacteria
	30	Origins of life	2.3	Origins of Life
	5	"		
	7	" <b>Exam 2</b>		
	12	Plant diversity	3.1	Plant Diversity
	14	"	3.2	Plant Reproduction
	19	Plant Structure and Function	3.3	Plant Form and Physiology
	21	"	3.4	Photosynthesis
	26	"	3.5	Soil and Plant Nutrition
November	28	Ecology <b>Exam 3</b>	4.1	Introduction to Ecology
	2	"		
	4	"	4.2	World Biomes
	9	"		
	11	Animal Structure and Function	5.1	Homeostasis
	16	"	5.2	Body Tissues
	18	"	5.3	Behavior
	23	"		
	25	<b>Thanksgiving Holiday</b>		
	30	" <b>Exam 4</b>		
December	2	Conclusion		
	9	<b>Final Exam</b> (10:00–12:45)		

<sup>1</sup> The first number refers to the five primary topics of the course, whereas the second refers to specific topics.

**NOTE:** This tentative syllabus is 'tentative': It lists general topics that will be covered; dates and specific topics may change.