

GENERAL BIOLOGY (BIOL 1305) – SPRING 2020

Instructor: Jeffrey T. Olimpo, Ph.D.

Office: B226, Biology Bldg. (Mon., 2:00 – 3:00pm; Tues., 11:00am – 12:00pm)*

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*These are hours when I am **guaranteed** to be in my office. If these times do not work for you, please send me an e-mail, and we can arrange another time to meet. I am here to help! ☺

COURSE DESCRIPTION

Welcome to *a study of life*! This course examines biological principles from cells to communities with a particular emphasis on structure and function. As a result, you will be introduced to a variety of topics including genetics, metabolism, cell structure and physiology, and homeostasis. Applications of biology to other areas of science will also be discussed.

COURSE STRUCTURE: AN OVERVIEW

Whether you have recently completed a course in the field or you have not been in the classroom for more than a decade, you possess the means to be successful in this class and have a wealth of experience to contribute to our discussions. In an effort to assist you in achieving your biology learning goals this semester, I have applied the RIPE (Read, Interact, Practice, Examine) method to each unit. You may be curious what this means for you as a student. Specifically, RIPE offers a scaffolded way to approach course content, as follows:

- You will first be asked to **read** selected sections of the E-book. *Importantly, the objective here is to familiarize yourself with the content for each unit or topic, not to achieve mastery.* Do not worry if you have questions or concerns after you are finished with the text. We will have an opportunity to discuss those questions/concerns in class.
- Class sessions will provide us with an opportunity to **interact** in the form of lectures, thought questions, and in-class activities. Class sessions also provide you with a formal space to pose questions, share ideas, and enhance your comprehension of course content.
- For most units/topics presented in the course, you will have an opportunity to **practice** what you have learned via both animation-based and adaptive courseware exercises. More information about homework for the course can be found later in this syllabus.
- Lastly, course assessments (e.g., exams) will provide a venue for you and I to **examine** your understanding of material presented in each unit. Additional details about the exams, such as dates and required materials, can be found later in this syllabus.

COURSE GOALS/OBJECTIVES

This course is designed to provide students with a broad introduction to the field of biology. Upon completion of the course, students will be able to:

- Understand the basic principles of the discipline including relationships and applications to other areas of science (e.g., chemistry)
- Discuss and demonstrate how scientists solve problems in the discipline
- Discuss and demonstrate attitudes important to the scientific community such as discerning cause-effect relationships, making evidence-based claims, and synthesizing facts from multiple sources in order to understand situations as a whole
- Demonstrate the ability to think critically and use the “language” of biology

COURSE TEXTBOOK & MATERIALS

1. *Principles of Life (3rd Ed.) w/ LaunchPad Access*; Hillis, Sadava, Heller, and Price. W.H. Freeman, Publishers; ISBN-13: 9781319249434

NOTE: I would recommend that you purchase the textbook directly from the publisher. We will walk through the process of how to go about doing so together in class. Regardless, please ensure that you have requested access to this specific course, as multiple sections of BIOL 1305 are available this term.

2. PENCILS (for Scantron® forms), pens, notebook paper, etc.

ACADEMIC INTEGRITY

As members of a scholarly community dedicated to healthy intellectual development, students and faculty are expected to share the responsibility of maintaining high standards of honesty and integrity in their academic work. All material for this course must be your work and no one else's. **Cheating or plagiarism in any form will not be tolerated.** This includes, but is not limited to, copying someone else's work on an assignment or exam and using banned material while taking exams (e.g., iPods or cell phones). Please note that all suspected instances of plagiarism or academic dishonesty will be referred to the Dean of Students Office, in accordance with UTEP policies and procedures.

The honor code also states that all members of the UTEP community are entrusted with the responsibility to uphold and promote five fundamental values: Honesty, Trust, Respect, Fairness, and Responsibility. These core elements foster an atmosphere, inside and outside of the classroom, which serves as a foundation and guides the UTEP community's academic, professional, and personal growth. Endorsement of these core elements by students, faculty, staff, administration, and trustees strengthens the integrity and value of our academic climate.

COMMUNICATIONS

When you e-mail me, please include a proper subject, any message you are responding to, the course name and CRN, as well as your name. Please use your UTEP account to ensure the e-mail is not blocked by the university's spam filter. If you e-mail me directly from our Blackboard course, essential information like the course name and section will automatically be included. I will do my best to respond to your e-mail within 24-48 hours. If you do not receive a response from me in this timeframe, I ask that you please re-send your e-mail. Ensure that you regularly check the e-mail account listed for you in Blackboard, as this is where I will send all communications.

CENTER FOR ACCOMMODATIONS AND SUPPORT SERVICES

Students with disabilities who wish to request accommodations must be registered with the Center for Accommodations and Support Services (CASS) Office in Room 106 of the Union East Bldg. You may contact them at (915) 747-5148 or cass@utep.edu for more information. Once you are registered with the CASS Office, you will please need to see me as soon as possible so that we may have a private conversation to discuss accommodations, as recommended by CASS.

TECHNICAL SUPPORT

The IT Support Team can assist with Blackboard, password resets, and student e-mail accounts. Hours and other helpful information can be found at <http://www.helpdesk.utep.edu>.

COURSE GRADING & EXPECTATIONS

COURSE GRADING:

- Exams #1 - #3 45% (lowest grade will be dropped)
- Final Exam (Cumulative) 25%
- Homework Exercises 20%
- Attendance/Participation 10%

A = 90 - 100%	D = 60 - 69%
B = 80 - 89%	F = <60%
C = 70 - 79%	

I may, at times, distribute extra credit that is designed to reinforce course concepts. It is your choice whether or not to complete these assignments. Please also note that the "+/-" grading system will *not* be used in this course as per departmental and university policies.

ATTENDANCE/PARTICIPATION

Your attendance is expected for all lectures and is **required** for all exams. Since the exams are centered around the reading, lectures, and activities we will discuss/complete throughout the semester, I **highly recommend** that you attend each class session. Class will begin promptly at **1:30pm** and will run no later than 2:50pm. If, for whatever reason, you cannot make it to class on time, please do your best to enter quietly when you do arrive.

In addition to attendance, your participation in the course will assist you in gaining the most from this experience and will give us an opportunity to grow as a community of learners. We will make frequent use of embedded thought questions within each lecture, and I will occasionally ask you to complete in-class activities/case studies throughout the semester. These exercises are designed to help me gain a better understanding of how to best structure the course in a way that will allow you to be successful and to meet your own personal learning goals. ***On random days throughout the semester, I will grade these activities/case studies for participation points.*** Collectively, these exercises will account for 10% of your overall grade in the course.

LECTURE CONDUCT

Please make every effort to be courteous to your fellow students and myself. If you know you are a constant Facebook-er or texter, please sit toward the *back* of the classroom so as to minimize distraction. Disruptions will not be tolerated – this means no cell phones on ring mode, no conversations with neighbors, etc.. If it is an emergency and you must make/take a call, please exit the lecture hall quietly, complete your call, and return quietly once you are finished. In addition, please note that materials will frequently be distributed at the start of class. If you happen to arrive late, please take your seat quietly, as there will be opportunities to retrieve those materials at a later point during the class session (or I can happily deliver them to you, if need be).

BLACKBOARD

This class makes extensive use of Blackboard® (<https://adminapps.utep.edu/blackboardlearn>). You will use Blackboard to download lectures, access assignments, download or print course materials, and check your grades. Please note that your login and password are the same as you would use to access your UTEP e-mail account.

LECTURES

Lecture notes will be posted at least 24 hours in advance of our class session. **It is your responsibility to print and/or download these notes and bring them to class (though please do not hesitate to let me know if you require assistance in this regard).** You will also notice that there are several blanks throughout these notes. As the lecture proceeds, you will want to be sure to fill in these blanks based on the day's material. A word of caution – these blanks *do*

indicate important topics or ideas from the lecture; however, you should *not* focus only on those terms when studying for exams!

EXAMS

Each of the first three exams will cover material from the lectures directly preceding it, not including material covered on previous exams (if applicable). The final exam is **cumulative** and will cover material from the last fourth of the course as well as from the rest of the semester. The format for all exams will be a combination of multiple-choice/true-false items, and the lowest grade of the first three exams will be dropped. Please bring several #2 pencils and erasers with you to each exam.

Please note that I will provide a Scantron® form for all exams! You will **not** be allowed to listen to your iPod or any other portable device (cell phones included) during the exam, so please ensure that they are left in your backpack throughout the exam, and your backpack is placed under your desk. I will have the time displayed for you on the projector screen.

Attendance is **mandatory** for all exams, and the exam dates are non-negotiable. If you miss an exam without prior notification and approval, you will receive a score of zero for that exam. Because the lowest exam grade of the first three exams is dropped, there are **NO MAKE-UP EXAMS**. It is therefore in your best interest to take all exams in case you experience an emergency and need to miss one later in the semester.

The final exam for this course will be held on **Thursday, May 14th**, from **1:00 - 3:45pm** in our classroom. You are **required** to attend the final, and no make-up finals will be administered.

HOMEWORK EXERCISES

In an effort to help you prepare for upcoming exams in the course, I will distribute (via Blackboard) a series of animation-based and adaptive courseware modules that contain questions pertaining to the major topics covered within each unit. New modules will open at 5:00pm on the release date and are due **at the beginning of the next class session** (please see the homework schedule on the next page for all release and due dates for the semester), unless otherwise noted. There will be ten (10) homework exercises distributed throughout the semester, with this series of assignments collectively accounting for 20% of your overall grade in the course.

Each homework exercise will consist of two components, as follows:

- ***In Focus Video Animations:*** This portion of the homework exercise provides you with an opportunity to explore, in depth, a particular topic that we have discussed as part of the unit. All video animations have been structured using the EdPuzzle online platform, which

presents you with additional opportunities to review (via questions embedded in the animation) material covered in the video/in class. In order to access the videos, you will need to register for an EdPuzzle student account. This can be done by: (a) clicking on the video assignment link; (b) clicking “Sign Up” on the EdPuzzle window that appears; (c) registering as a **student** using your full first name and last name, UTEP login, and a self-generated password; and (d) clicking “Join.” While watching the animation, I would strongly encourage you to take notes. I will collect these notes at the beginning of class on the day the assignment is due and award 1 pt. of extra credit for each note set that is submitted over the course of the semester (for a total possible 10 pts. of extra credit). Note sets will be returned the following class.

- **LearningCurve Adaptive Activities:** While the video animations are intended to focus on one particular topic within a unit, LearningCurve activities are intended to be more comprehensive in nature. Based upon selected E-Book content, LearningCurve will present you with several multiple-choice questions that will not only aid you in developing a foundational understanding of course topics but also in drawing connections between concepts. LearningCurve uses an adaptive interface, which means that it is customized for *you* and therefore better able to help you achieve mastery.

Please do not hesitate to let me know if you have any questions or concerns as you are working *or* if you experience any technical issues, and I will work to resolve them ASAP!

ARQ #	Topic	Release Date	Due Date
1	Scientific Inquiry	Jan. 23 rd	Jan. 28 th
2	Chem./Macromolecules	Feb. 6 th	Feb. 11 th
3	Cells and Organelles	Feb. 20 th	Feb. 25 th
4	Cellular Membranes	Feb. 27 th	Mar. 3 rd
5	Energy and Metabolism	Mar. 5 th	Mar. 12 th
6	Cellular Respiration	Mar. 26 th	Mar. 31 st
7	DNA Replication	Apr. 7 th	Apr. 9 th
8	Central Dogma	Apr. 9 th	Apr. 16 th
9	Gene Reg./Cell Division	Apr. 30 th	May 5 th
10	Genetics	May 5 th	May 7 th

PEER LEARNING ASSISTANT – CARESS RIDDELL

Please join me in welcoming Ms. Caress Riddell as our peer learning assistant for BIOL 1305 this semester. Caress will be available to assist with in-class activities, one-on-one or group tutoring sessions, and any questions or concerns that you might have. Outside of her office hours (TBD), she can best be reached via e-mail at criddell@miners.utep.edu.

LECTURE SCHEDULE

Wk.		Date	Lecture Topics	E-Book Section(s)
1	T	Jan. 21	Characteristics of Life	-
	R	Jan. 23	Scientific Inquiry	1.5
2	T	Jan. 28	Introduction to Evolution	1.4, 13.1
	R	Jan. 30	Chemistry of Life Small Molecules	2.1, 2.2, 2.5
3	T	Feb. 4	Carbohydrates and Lipids	3.1, 3.2
	R	Feb. 6	Proteins (and Nucleic Acids)	3.3, 3.4
4	T	Feb. 11	EXAM ONE	-
	R	Feb. 13	Cells: The Building Blocks of Life	4.5
5	T	Feb. 18	Cells: Organelles	4.5
	R	Feb. 20	Cell Membranes (Part I)	4.1 – 4.3
6	T	Feb. 25	Cell Membranes (Part II)	4.1 – 4.3
	R	Feb. 27	Cell Membranes (Part III)	-
7	T	Mar. 3	Thermodynamics Enzymes	2.3, 2.4, 3.5
	R	Mar. 5	Enzymes (Cont'd)	3.5
8	T	Mar. 10	ATP & Metabolism	5.1, 5.4
	R	Mar. 12	EXAM TWO	-
9	T	Mar. 17	<i>No Class ~ Spring Break</i>	-
	R	Mar. 19	<i>No Class ~ Spring Break</i>	-
10	T	Mar. 24	Cellular Respiration (Part I)	5.2
	R	Mar. 26	Cellular Respiration (Part II)	5.2
11	T	Mar. 31	Photosynthesis	5.5
	R	Apr. 2	DNA Replication (Part I)	9.1, 9.2
12	T	Apr. 7	DNA Replication (Part II)	9.2
	R	Apr. 9	Transcription	10.1, 10.2
13	T	Apr. 14	Translation	10.3, 10.4
	R	Apr. 16	EXAM THREE	-
14	T	Apr. 21	Prokaryotic Gene Regulation	11.1, 11.2
	R	Apr. 23	Eukaryotic Gene Regulation	11.4, 11.5
15	T	Apr. 28	Cell Division: Mitosis	7.2
	R	Apr. 30	Cell Division: Meiosis	7.3, 7.4
16	T	May 5	Introduction to Genetics (Part I)	8.1
	R	May 7	Introduction to Genetics (Part II)	8.1

* Please note that the course drop date is March 27th.

TIPS FOR SUCCESS IN BIOL 1305

1. **Come to Class!** ☺

This seems obvious but cannot be stressed enough. Some students believe that they can get by using photocopies of their friend's notes. This might work, but chances are you are not going to understand what your friend's notes actually mean (unless they are gracious enough to explain it to you in detail).

2. **Recopy your Lecture Notes**

You do not have to copy everything word-for-word, per se, but you should at least take a few moments after class to make sure you understand what you have jotted down. This will prevent those "what does that say/did that mean?" moments later on down the line. When we have used visuals a lot in a given lecture (and we will), you will benefit a ton from redrawing these visuals and describing out loud to yourself and to others what you have drawn.

3. **Science is a Different Language**

This is the only time I am going to condone memorization. You just cannot get by in a biology course (or any science course) without having an understanding of the definitions and terminology used by that discipline. The easiest way to accomplish this goal is to keep a series of notecards containing the definitions of popular terms that we have discussed in class. Do **NOT** try to copy everything from your notes onto a flashcard – this will only become overbearing. Remember, if your stack of notecards for *one* chapter looks like it required someone to destroy a whole rainforest, you are doing it wrong!

4. **Your Textbook is a Resource**

Your textbook is a guide and a resource. It is not meant to replace coming to lecture, and we will not cover much of the minutia discussed in the book. That does not mean you should not read it. Just be aware that it is a tool to support your learning, not a mechanism to learn via osmosis.

5. **Find a "Study-Buddy" or form a Study Group**

Do this sooner rather than later, but only if study groups help you!! Try re-teaching lectures to your friends or quizzing them on important topics. If you are capable of teaching material to your group, believe me, you understand it.

6. **Get Help Sooner, not Later**

If you are having difficulty with a topic, do not wait to seek help. Information about my office hours is on the first page of this syllabus. *Please use them!!* I could sit in my office

and watch the paint dry, but I would much rather be helping you master material. Do not be afraid to come to me for help, no matter what question you might have!

7. Budget your Time Wisely

I understand that you have other classes and obligations. The rule of thumb has always been to spend 2-3 hours outside of class each week for every hour in class. Personally, I find that to be insane. Instead, I recommend keeping a calendar that indicates, each day, what goals you intend to accomplish for BIOL 1305. It does not have to be anything big, either. Your goal might be “make flashcards for Chapter 3.” Setting reasonable and manageable goals will help keep you motivated.

8. Stay Positive!

I got a “D” on the first biology exam I ever took in college, and I about lost it. But here I am, more than 10 years later, still in one piece (I know; I am old). My point: *stick with it!* Believe in yourself and do everything you need to succeed. And remember, I am here to help!

*** Disclaimer: I reserve the right to change the contents of this syllabus due to unforeseen circumstances. Students will be given notice of relevant changes through Blackboard and e-mail. Exam dates will **NOT** change.***

WELCOME TO BIOL 1305!!! 😊