



# TEXARKANA COLLEGE

**Syllabus:** Principles of Biology I for Science Majors

**Course Number:** BIOL 1406

**Semester & Year:** Fall

**Instructor Information**

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Office Hours: Monday through Friday – 2:45 to 3:30 pm or by appointment.

**Textbook Information**

- [Principles of Life. Hillis, Sadava, Heller and Price 1<sup>st</sup> ed.\(2012\) Sinauer Assoc Inc and W.H. Freeman and Co. ISBN 978-1-4292-5721-3](#) (required)
- Lab Packet – I will provide these (required)
- Protective clothing - Safety glasses will be required for certain lab activities, lab coat or apron (old work shirt) is encouraged.
- Optional Website: (yourBioPortal.com)  
<http://courses.bfwpub.com/hillis1e.php>

**Student Learning Outcomes for the Course**

*At the conclusion of the **lecture portion** of this course students should be able to:*

1. Describe the characteristics of life.
2. Explain the reasoning used by scientists.
3. Identify the basic properties of substances needed for life.
4. Compare and contrast the structures, reproduction, and characteristics of viruses, prokaryotic cells, and eukaryotic cells.
5. Describe the structure of cell membranes and the movement of molecules across a membrane.
6. Identify the substrates, products, and important chemical pathways in metabolism.
7. Identify the principles of inheritance and solve classical genetic problems.
8. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
9. Describe the unity and diversity of life and the evidence for evolution through natural selection.

At the conclusion of the **laboratory portion** of this course students should be able to:

1. Be able to apply scientific reasoning to investigate questions, and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
3. Communicate effectively the results of investigations.
4. Describe the characteristics of life.
5. Explain the reasoning used by scientists.
6. Identify the basic properties of substances needed for life.
7. Compare and contrast the structures, reproduction, and characteristics of viruses, prokaryotic cells, and eukaryotic cells.
8. Describe the structure of cell membranes and the movement of molecules across a membrane.
9. Identify the substrates, products, and important chemical pathways in metabolism.
10. Identify the principles of inheritance and solve classical genetic problems.
11. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
12. Describe the unity and diversity of life and the evidence for evolution through natural selection.

### **Student Requirements for Completion of the Course** **Lecture Topics/ Exams - Biology 1406**

#### **EXAM I**

Chapter 1: Principles of Life

Chapter 2: Life Chemistry and Energy

Chapter 3: Nucleic Acids, Proteins and Enzymes

Chapter 4: Cells: The Working Units of Life

#### **EXAM II**

Chapter 5: Cell Membranes and Signaling

Chapter 6: Pathways that Harvest and Store Chemical Energy

Chapter 7: The Cell Cycle and Cell Division

Chapter 8: Inheritance, Genes and Chromosomes

#### **EXAM III**

Chapter 9: DNA and Its Role in Heredity

Chapter 10: From DNA to Protein: Gene Expression

Chapter 11: Regulation of Gene Expression

Chapter 12: Genomes

**FINAL EXAM** (Comprehensive) Emphasis on Student Learning Guide Questions  
Chapters 1-11 and selected essay questions from Exams I, II, and III.

## Student Assessment

Three (3) lecture exams will be given over three units and a comprehensive final exam, for a total of four exams valued at 55% of the course grade. The examination format will include multiple choice, short answer and essay items. Exams will be administered a minimum of one (1) week after being announced. Please inform the instructor ASAP if you know you will miss a lecture exam on the scheduled date and make arrangements to take the exam in advance. Portions of the lecture unit exams will be conducted in the TC testing center.

### **Course Testing POLICY - TC Testing Center**

**Lecture Exams are conducted using the TC CMS (Moodle) and administered in the TC testing Center.**

**Part 1: Section A 40 multiple guess questions (56 points/100)**

This part of the exam consists of 40 multiple guess "choice" questions. (each question is valued @ 1.4 points each) This portion is not timed but must be completed in one session, and you only have 1 attempt to complete this 40 question session.

**You are also required to take Part I: Section B: 10 question Merit based curve portion of the exam (10 questions @ 1.4 points = 14 points) during the same testing session in the TC testing center. (Failure to complete this portion during the same session will result in a score of zero on Part B of the exam.)**

**Part II:** Essay/short answer portion of the exam is available by requesting a test booklet from the TC testing center proctor. Write your responses on the test booklet. No outside paper is allowed on this exam. You are NOT required to take the essays during the same test session as Part I Section A & Section B.

EXAM must be completed by \_\_\_\_\_ before the close of the testing center that evening. (can't start a test after 8PM ... center closes at 8:30PM.)

I understand the course requirement to take the two (2) parts of the remaining lecture exams Part I Section A and Part 1 Section B (Total of 70 points) during the same testing session (no break allowed) on the Moodle Course Management System (TC Online). I understand that I may take the Part II Essay (30 points) during a different testing session. All sections of the exam must be completed prior to the exam deadline. I also understand no outside materials (paper, study materials) are allowed to be brought in to the testing center.

**I understand that there are no makeup exams available for these exams.**

**The course grade will be calculated from the following schedule:**

|  |             |
|--|-------------|
| <b>Lecture Exams (3) &amp;<br/>Final Exam (1)</b>  | <b>55%</b>  |
| <b>Online Weekly Quizzes</b>                       | <b>10%</b>  |
| <b>Lab Exams + Participation Lecture &amp; Lab</b> | <b>20%</b>  |
| <b>Lab Reports</b>                                 | <b>15%</b>  |
| <b>Total</b>                                       | <b>100%</b> |

### **Grading Scale**

| <b>Semester Grade</b> | <b>Course Average</b> |
|-----------------------|-----------------------|
| <b>A</b>              | 90-100                |
| <b>B</b>              | 80-89                 |
| <b>C</b>              | 70-79                 |
| <b>D</b>              | 60-69                 |
| <b>F</b>              | 59-below              |

### **Class Schedule**

Chapter 1: Principles of Life

Chapter 2: Life Chemistry and Energy

Chapter 3: Nucleic Acids, Proteins and Enzymes

Chapter 4: Cells: The Working Units of Life

**EXAM I (Chapters 1-4) (5<sup>th</sup> week)**

Chapter 5: Cell Membranes and Signaling

Chapter 6: Pathways that Harvest and Store Chemical Energy

Chapter 7: The Cell Cycle and Cell Division

Chapter 8: Inheritance, Genes and Chromosomes

**EXAM II (Chapters 5-8) (10<sup>th</sup> week)**

Chapter 9: DNA and Its Role in Heredity

Chapter 10: From DNA to Protein: Gene Expression

Chapter 11: Regulation of Gene Expression

Chapter 12: Genomes

**EXAM III (Chapters 9-12) (15<sup>th</sup> week)**

## **Absentee Policy (TC Official Policy)**

*Texarkana College's absentee policy allows instructors to withdraw a student from a course due to excessive absences. If a student leaves and returns during class or leaves the class before the class is over, he/she may be considered absent. Three tardies constitute one absence. Check the syllabus for each class to see how much time you are allowed to be late before the tardy is counted as an absence. **(10 minutes after class has begun)***

*Do not stop attending a class without formally withdrawing from the course by the institution's published Last Day to Drop. If a student does not attend class and does not withdraw from the class, the student will receive a grade of F in the class. The published Last Day to Drop applies to students; an instructor may withdraw a student for excessive absences at any time during the semester. Withdrawal from a course(s) may affect a student's current or future financial aid eligibility. Students should consult the Financial Aid Office to learn both short and long term consequences of a withdrawal.*

As an adult learner, you must assume responsibility for attending lecture classes and laboratories. It is to your benefit to be present at each class session.

You should make every effort to be present in each class because: the laboratory class is designed to provide hands-on learning experiences. Students will learn basic laboratory skills while reinforcing concepts learned in lecture. To a large extent, grades in the laboratory will reflect participation and laboratory skills acquired, so it is important that students do not miss laboratory exercises.

**The maximum number of absences in a MW or T-TR class is four (4) per semester (the equivalent of two (2) weeks of instruction).** The only excused absences are for officially recognized TC student club activities or for Texarkana College official business. **Please Note: Illness and doctor appointments do not qualify as an excused absence.**

### ***EXCUSED ABSENCES (TC Official Policy)***

*A student's absence due to school trips and/or school business will not be counted against a student's allowable number of absences. Military duty and absences for Holy Days (FBD LEGAL) are covered in a separate section of the catalog and the student handbook. These are the only types of absences that are considered excused by Texarkana College. Responsibility for work missed for any absence is placed on the student. Instructors are required to allow students to make up work missed if the absence is due to military duty or religious holy days when students follow the correct notification procedures. Instructors are not required to allow students to make up work for absences due to other reasons. Make-up policies are listed in each individual instructor's syllabus.*

**WARNING: If you exceed the maximum number of absences for this course (lecture and lab are counted together you will be dropped (W) from the course. For example if you miss a lecture and attend the lab you will be counted absent for that class session (maximum of 4 sessions) (NO EXCEPTIONS).**

Students are required to attend lecture and laboratory classes for the entire period. Students that arrive more than 10 minutes after class has begun or leave early, will be marked as absent. Students that arrive between 1 and 10 minutes after class has begun will be recorded as tardy. **Three tardies will be recorded as an absence.** Students that sleep during class, ignore this class because they are busy texting, chatting, checking social media sites or doing homework for other classes or do not participate in class activities for any other reason, **will be marked as absent!**

If situations make it necessary for missing class or lab you are still responsible for all the work you missed during class and lab. If you miss class, you should let me know ASAP (by TC student e-mail) and in advance if at all possible. I can give you the assignments to help you remain current in the course.

If circumstances develop (e.g. extended illness, moving from the city, etc.) which necessitates your withdrawal from this or any other course be sure to let me know AND officially withdraw in the Director of Admissions office located in the C. M. Nelson Administration building. The date each semester is posted on the inside page of the current Texarkana College Catalog / Website under "Academic Calendar". A grade of W is recorded on your permanent transcript if you withdraw before the official deadline.

### **Make-up Policy**

Lecture Exams: The only portions of lecture exams that will be available as a makeup exam (only during final exam week) will those portions of an exam that were administered during a regular classroom session. All portions of exams that were originally administered over a period of time in the college testing center **cannot** be made up. NO EXCEPTIONS will be made to this policy. **IMPORTANT: No class curve (grade adjustment) is applied to make up exams.**

### **Lab Exams: No makeup exams are available for Lab Exams !**

**Lab Reports and other written assignments** in lecture and lab are due at the beginning of the class session (lecture) and will be penalized 10% for being late for the first 24 hours and 20% for the second 24 hours and will not be accepted after 48 hours . Late work can be turned in via e-mail to my e-mail address:

[pstevenson@simmsisd.net](mailto:pstevenson@simmsisd.net)

## Class Conduct

Students are expected to conduct themselves as adults. Any student who acts in such a manner as to disturb the class and interfere with the learning process will be expelled from the course with a grade of "F". **No music players or cellular phones are permitted in my classroom. No texting or talking during class...TURN THEM OFF!** (See Absentee Policy above)

If you bring a cell phone (electronic communication device) into my classroom, be sure that it is **turned off and not out on your desk**. If I notice you using your phone during lecture and ask you to turn it off on the first offense the second time **you will be asked to leave and you will be counted absent for that class period.** (You will be free to communicate electronically during breaks during each class session.)

**Any student that has a cell phone or any electronic communications device in their possession during any quiz or examination will receive a zero (0) for the quiz or examination. NO EXEPTIONS! You will also be counted absent for that class session.**

**All electronic devices** (e.g. audio recorders, laptop/tablet computers etc.) brought into class must be cleared by the instructor for use for **each** class session.

## Academic Integrity Statement

Scholastic dishonesty, involving but not limited to cheating on a test, plagiarism, collusion, or falsification of records will make the student liable for disciplinary action after being investigated by the Dean of Students. Proven violations of this nature will result in the student being dropped from the class with an "F".

This policy applies campus wide, including TC Testing Center, as well as off-campus classroom or lab sites, including dual credit campuses. This information can be found in the Student Handbook at <https://texarkanacollege.edu>.

## Disability Act Statement:

Texarkana College complies with all provisions of the Americans with Disabilities Act and makes reasonable accommodations upon request. Please contact Larry Andrews at 903.823.3283, or go by the Recruitment, Advisement, and Retention Department located in the Administration building for personal assistance.

If you have an accommodation letter from their office indicating that you have a disability which requires academic accommodations, please present it to me so we can discuss the accommodations that you might need for this class. *It is best to request these changes at the beginning if not before the start of class* so there is ample time to make the accommodations..

## Financial Aid:

**Attention!** Dropping this class may affect your funding in a negative way! You could owe money to the college and/or federal government. Please check with the Financial Aid office before making a decision.

## Course Continuity Plan

In the case that the college officially closes because of an emergency (inclement weather etc.) which causes a short term disruption of this course, we will use the TC Moodle CMS ("TC Online") and TC student e-mail to continue this course in the short term (1-3 weeks). All students need to use their campus e-mail to receive course related information.

**I reserve the right to modify the syllabus at any time during the semester. The online version of this syllabus (*TC Online CMS*) is the official syllabus and supersedes all versions of this document in print.**

By signing this statement, I agree that I have read and understand what is expected of me to perform satisfactorily in this course of study.

*I also understand that any photographic and or audio recordings that are made of students including myself) during this class of are the property of Texarkana College and can be used to promote the educational mission of Texarkana College.*

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Student Name (**PRINT** First & LAST NAME)

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Legal Signature

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TC Course Number / Section Number

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Date