**Syllabus:** Biology I for Science Majors – **Lecture Course**

**Course Number:** **BIOL 1306 -1H1 HYB**  
**Semester & Year:** Fall 2024 1-8WK (8/14/24 – 10/9/24)

**Instructor Information**

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Office Hours: (*email for an appointment)*

**Textbook Information**

* **Required Download Only- Biology** – Openstax Rice University (FREE downloadable PDF format ) <https://openstaxcollege.org/textbooks/biology>
* **Strongly Recommended!!** Textbook **Principles of Life**. Hillis, Sadava, Heller and Price 1st ed.(2012) Sinauer Assoc Inc and W.H. Freeman and Co. **ISBN 978-1-4292-5721-3** (This book is **not available** at the TC bookstore!!! Please DO NOT purchase this book before talking to me first!)

**Course Communication**

Official communication is through TC student email. (myTC web portal)

**Technical Requirements & Solutions for this course**

*A basic level of technical competence and equipment are necessary for participating in this online class. You should already be able to perform the following tasks:*

* Attach document files to an e-mail message.
* Complete assignments using (MS Word) word processing software.
* Locate, save, and retrieve files on the computer.
* Send/receive email via your TC student email account.
* Use a web browser like Internet Explorer or Firefox and search engines like Google.

*You should have regular, reliable access to software and Internet resources with a modern computer manufactured within the last three years. (access to only a mobile device is NOT enough to succeed in this class).*

**TC Computer Requirement Policy:**

Students are required to have a computer with Internet access for classes. The computer must be an actual computer – smart phones, iPads, Androids, etc., are not acceptable substitutes because they lack software compatibility necessary to complete all assignments and tests. Financial costs for the necessary equipment and internet access are the responsibility of the student.

Students needing to purchase a computer may do so through the Texarkana College Bookstore. Systems purchased through the bookstore meet or exceed all requirements, are competitively priced, and may be purchased using financial aid funds. If the system is purchased through another source, it is the student’s responsibility to ensure the system meets all requirements.

Computer systems requirements:

* Webcam, microphone, and speakers or headphones
* Windows 10 or a recent version of Mac OS (minimum Sierra). Windows 10 S mode is not supported
* Hardware capable of running Microsoft Teams (free download) and supports multi-media playback
* Support for Chrome or Microsoft Edge – Note: Firefox, Safari, or other browsers may not work on all TC applications
* Able to run Microsoft Office which will be provided free to TC students
* Adobe Reader or another PDF viewer
* Antivirus software such as Windows Defender or another 3rd party anti-virus solution
* The Respondus Lockdown browser is used for taking tests; therefore, the system must be capable of running this software. Most newer systems that meet other specifications should work.

Students should regularly backup content to prevent loss of coursework due to hardware failure. Backup copies of documents and other coursework may be placed on OneDrive cloud storage. OneDrive is included free of charge for all TC students.

***LockDown Browser + Webcam* Requirement**

**This course may require the use of *LockDown Browser and a webcam* for online exams**. The webcam can be the type that's built into your computer or one that plugs in with a USB cable.

You must use a Mac or Windows computer or iPad device. **Mobile smart phones are NOT supported. This is a course requirement (not optional).**

Watch this brief video to get a basic understanding of LockDown Browser and the webcam feature.

<https://www.respondus.com/products/lockdown-browser/student-movie.shtml>

**Student Learning Outcomes for the Course**

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| *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. |

**Student Requirements for Completion of the Course**

**Lecture Topics/ - Biology 1306**

**EXAM I**   
Chapter 1: Principles of Life  
Chapter 2: Life Chemistry and Energy  
**EXAM II**

Chapter 3: Nucleic Acids, Proteins and Enzymes

Chapter 4: Cells: The Working Units of Life **EXAM III**

Chapter 5: Cell Membranes and Signaling   
Chapter 6: Pathways that Harvest and Store Chemical Energy

**EXAM IV**

Chapter 7: The Cell Cycle and Cell Division

Chapter 8: Inheritance, Genes and Chromosomes

**EXAM V**Chapter 9: DNA and Its Role in Heredity

Chapter 10: From DNA to Protein: Gene Expression

**FINAL EXAM**

Comprehensive over chapters 1-10.

**Student Assessment**

Five (5) lecture exams will be given over five units and a comprehensive final exam, for a total of **six exams.** (see section above) The examination format will include multiple choice, short answer and essay items. Exams will be administered according to the course schedule /calendar. The lecture unit exams and the Final course exam will be conducted outside of class time and administered in the Texarkana College Testing Center.

**Course Testing POLICY**

**Lecture Exams**

The lecture exams are use Multiple Choice and Matching and True/False format; on the Moodle Course Management System (TC Online) and will be conducted in the TC Testing Center.

**Course Format and Layout (IMPORTANT!!)**

This is a HYBRID format compressed 8-week course. Each week of the semester the course will meet two days in Lab Room #40 and two days on MS TEAMS virtually (for a total of four class meetings per week! There are assignments due in every class meeting!

**Bonus Credit Questions**:

During each in person lecture class session each student will answer questions in person in class or if the class was conducted virtually on MS-TEAMS via email. You will receive a “bonus credit” for each question answered correctly. These bonus credits will be converted into bonus points to be awarded to each student’s individual lecture exam (1,2,and 3) score based on a conversion taking into account the performance of the entire class on the exam. **For MS-TEAMS virtual lecture sessions,** **the student answer/ responses to the bonus credit questions must be received via the moodle assignment portal before 11:59PM of the day of the lecture session or assigned day by the instructor. Late responses/makeups / or by email will not be accepted.**

**The course grade is available on the *myTC* under the student tab and will be calculated from the following schedule:**

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| **Lecture Exams (5)** | **60%** |
| **Final Comprehensive Exam** | **20%** |
| **Chapter Homework Quizzes** | **5%** |
| **Participation (Bonus Questions)** | **15%** |
| **Total** | **100%** |

**Grading Scale**

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| **Semester Grade** | **Course Average** |
| **A** | 89.5-100 |
| **B** | 79.5-89.4 |
| **C** | 69.5-79.4 |
| **D** | 59.5-69.4 |
| **F** | 59.4-below |

**Class Schedule**

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| **Topics** | **Principles of Life 1 / 2 Edition** | **Biology Openstax Rice Univ. (Green book)** |
| **EXAM I Unit** |  |  |
| Introduction Scientific Method | Chapter 1 Principles of Life | Chapter 1 The Study of Life |
| Basic biological Chemistry | Chapter 2 Life Chemistry and Energy | Chapter 2 The Chemical Foundation of Life  Chapter 6 Metabolism |
| **EXAM I** | **(see Moodle class page)** |  |
| Macromolecules and Energy within cells | Chapter 3 Nucleic Acids, Proteins and Enzymes | Chapter 3 Biological Macromolecules  Chapter 6 Metabolism |
| Cell anatomy/function | Chapter 4 Cells: The Working Units of Life | Chapter 4 Cell Structure |
| **EXAM II** | **(see Moodle class page)** |  |
| Cell Membranes | Chapter 5 Cell Membranes and Signaling | Chapter 5 Structure and Function of Plasma Membranes  Chapter 9 Cell Communication |
| Cellular Respiration and Photosynthesis | Chapter 6 Pathways that Harvest and Store Chemical Energy | Chapter 7 Cellular Respiration  Chapter 8 Photosynthesis |
| **Exam III** | **(see Moodle class page)** |  |
| Cell Cycle and cell division | Chapter 7 The Cell Cycle and Cell Division | Chapter 10 Cell Reproduction  Chapter 11 Meiosis and Sexual Reproduction |
| Genetics | Chapter 8 Inheritance, Genes and Chromosomes | Chapter 12 Mendel’s Experiments and Heredity  Chapter 13 Modern Understandings of Inheritance |
| **Exam IV** | **(see Moodle class page)** |  |
| DNA Replication | Chapter 9 DNA and its Role in Heredity | Chapter 14 DNA Structure and Function |
| Transcription and Translation | Chapter 10 From DNA to Protein: Gene Expression | Chapter 15 Genes and Proteins |
| **EXAM V** | **(see Moodle class page)** |  |
| **FINAL EXAM** | **(see Moodle class page)** | Comprehensive Chapters 1-10 |

**Absentee Policy**

**COURSE ABSENCES**

**The maximum number of absences is two (2) per semester.** 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.**

**WARNING: If you exceed the maximum number of absences for this course you may be dropped (W) from the course.**

Students are required to attend lecture 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 and no later than10 minutes after class has begun will be recorded as tardy. **Three (3) tardies will be recorded as an absence**.

**VERY IMPORTANT!!!** If situations make it necessary for missing class you are still responsible for all the work you missed during class. If you miss class, you should let me know ASAP (by TC student e-mail) and in advance if 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**

**No makeups** are given for lecture exams in this course!!!

**Written assignments**

Lecture assignments are due before the beginning of the scheduled class session.

**Class Conduct**

Students are expected to conduct themselves as adults. **There will be a zero tolerance policy for any behavior that is disruptive of classroom learning.  This includes ANY use of vulgar language or rude behavior toward instructor or any other student in the class.** Any student who acts in such a manner as to disturb the class and interfere with the learning process will be asked to leave the classroom and may be expelled from the course with a grade of "F".

**All exams will be conducted in the TC Testing Center.**

**Exams are understood to be taken by the student without the help or assistance from any other person. If students are discovered as having colluded or being aided in violation of the course policies outlined in this syllabus, within the TC Online course page (Moodle LMS) or those of the TC Student Handbook will receive a zero (0) for the quiz or examination. You will also be counted absent for that class session. Further disciplinary action is at the discretion of the instructor.**

**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. ***The use of artificial intelligence powered resources such as Chat GPT or similar platforms may be considered a violation of Academic Integrity and should be avoided!*** 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 the Recruitment, Advisement, and Retention Department located in the TC Library 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 financial aid 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, viral pandemic etc.) which causes a disruption of this course, we will use the TC Moodle LMS (“TC Online”) and TC student e-mail and the REMIND SMS text message service to continue this course in the short term. All students need to use their campus e-mail to receive course related information. **Students should check their TC email multiple times per day. The** [**TC Help Desk**](https://www.texarkanacollege.edu/helpdesk/) **has instructions on how to setup your smart phone to receive TC student email on your device** [**here**](https://www.texarkanacollege.edu/helpdesk/)**.**

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| **Basic Needs Security**  Any student who has difficulty affording groceries or accessing enough food to eat every day, or who lacks a safe and stable place to live and believes this may affect their performance in this course or ability to remain in school, is urged to contact Tonja Blaise, Director of Student Retention, at 903-823-3349 for support. Furthermore, please notify the professor if you are comfortable in doing so. This will enable the professor to provide any resources to help you than they may possess.  **Alternate Operations during Campus Closure**  In the event of an emergency or announced campus closure due to a natural disaster or pandemic, Texarkana College may need to move to altered operations and course delivery methods. During this time, Texarkana College may opt to continue delivery of instruction through methods that include, but are not limited to: online learning management system (Jenzabar or Moodle), online conferencing through TEAMS, email messaging, and/or an alternate schedule.  It is the responsibility of the student to monitor Texarkana College's website ([www.texarkanacollege.edu](http://www.texarkanacollege.edu)) for instructions about continuing courses remotely, instructor email notifications on the method of delivery and course-specific communication, and Texarkana College email notifications for important general information.  **COVID-19 Online/Virtual Environment Instructional Commitment**  The ongoing Covid-19 situation will require that some course materials and instruction are provided through an online and/or virtual format. Even if all or a portion of a class was originally scheduled to meet face to face, social distancing guidelines associated with Covid-19 will limit the number of students who are able to attend face to face classes in person simultaneously. Further, circumstances associated with Covid-19 could cause the college to be forced to shift completely to an online and/or virtual delivery at any time during the semester. While TC faculty members are committed to providing students the option of face to face instruction if possible, students should be prepared to continue their classes in an online and/or virtual environment if necessary. Texarkana College is committed to maintaining engaging, high quality instruction regardless of the delivery format.  **I reserve the right to modify the syllabus at any time during the semester. The online version of this syllabus (*TC Online LMS*) is the official syllabus and supersedes all versions of this document in print.** |
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