



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

Course Number: BIOL 1106

Semester & Year: FALL 2015

Instructor Information

Name: Mark Storey

Office: Chemistry Building Rm. 202

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Office Hours:

Textbook Information

- **Lab Packet – BIOL 1106 TC Bookstore (required)**
- Biology – Openstax Rice University (free download /alternative textbook)
<https://openstaxcollege.org/textbooks/biology>
- Protective clothing - Safety glasses will be required for certain lab activities, lab coat or apron (old work shirt) is encouraged.

Student Learning Outcomes for the Course

*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.



Lab Reports and other written assignments in lab are due at the beginning of the class session 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: Mark.Storey@texarkanacollege.edu

Group Work: If you are absent during a lab unit, (or you fail to contribute to the group during a lab session) your individual grade for that unit will be penalized 10% from the group score earned for that unit.

Student Requirements for Completion of the Course Laboratory Topics/ Exams - Biology 1106

Unit I

Laboratory Safety
Soybeans & SO₂ - Experimental Design
Scientific Measurement
The Microscope
Intro to Lab Quest & Data Collection and Analysis (Temperature Change of a Solution of Weak Acid and a Weak Base)
The Cell

Lab Exam I (Unit I)

Unit II

Diffusion / Osmosis
Enzymes (Catalase Lab)
Chlorophyll – Chromatography of spinach leaves
Chlorophyll – Spectrophotometry of spinach leaves
Aerobic Cellular Respiration of Yeast / Peas
Cell Division Cell Cycle Mitosis
Cell Division – Meiosis
Monohybrid and Dihybrid Crosses Problem Sets (Mendelian Genetics and exceptions)
DNA Replication
Transcription and Translation (Protein Synthesis)
Prokaryotic Gene Regulation and Expression

Lab Exam II (Unit II)

The course grade will be calculated from the following schedule:

Laboratory Exams (2)	50%
Participation / Attendance	10%
Lab Reports	40%
Total	100%

Grading Scale

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

Make-up Policy

Lab Exams **can not be made up in this course**. If you know you are going to miss a lab exam you will need to make arrangements with the instructor to take the exam in advance.

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.*

In some vocational areas, such as nursing and cosmetology, certification requirements necessitate an absentee policy that is more stringent than the institutional policy. In these instances, the matter of certification takes precedence over local policies, since certification policies are established by the State of Texas.

Faculty members are not obligated to provide opportunities for students to make-up missed assignments and tests as a result of a student's absence from class. *The institution is not required to take attendance with the exception of certain workforce/vocational areas, such as nursing and cosmetology, where certification requirements require taking attendance. However, experience demonstrates that regular attendance enhances academic success. As such, students are expected to attend each meeting of their registered courses.*

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.*



EXCUSED ABSENCES

*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.***

MAXIMUM ALLOWABLE ABSENCES

After official registration, the following number of unexcused absences will be the maximum allowable before a student may be dropped from the class:

The maximum number of absences in this laboratory class is four (4) per semester (the equivalent of two (2) weeks of instruction).

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

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 expelled from the course with a grade of "F". **No music players are permitted in my classroom. No texting or talking on a phone or messaging device during class.**



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.

Current version last updated:

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.

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

Legal Signature

TC Course Number / Section Number

Date