

TEXARKANA COLLEGE

Syllabus: Principles of Biology I for Science Majors - Lab

Course Number: BIOL 1406

Semester & Year: Fall 2018

Instructor Information

Name: Shelby L. Strawn

BS in Biology and Secondary Life Science Education

MS in Curriculum and Instruction and 20 hours in Biology

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Office Hours: Morning Tutorials from 7:45-8:15 a.m. or by appointment only.

Conference: A Day | 7th Period | 1:10-2:40

Textbook Information

Biology - Campbell and Reece 6th edition (2002)

Biology - Openstax Rice University (alternative online textbook)

<https://openstaxcollege.org/textbooks/biology>

Materials:

- 1 - Three subject spiral notebook (with pockets in the dividers)
- May need project materials upon request throughout the school year

Course Communication

-Official communication is in class or via PG student email.

-Students will be assigned a biology textbook and other online resource materials as needed. *However*, we use Google Classroom **heavily** (as well as school email) for communication and learning. All students **MUST** sign and return their Acceptable Use Policy, Syllabus Agreement with signatures, and laboratory safety contract within the first week of school or they will be at risk of falling behind in class. ***Students always have access to computers on campus if for any reason they do not possess access at home.***

-Remind Text Service – Students must register for the REMIND text service (Free to use).

Remind Instructions: TEXT @cafag to this number: 81010

Student Learning Outcomes for the Course

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

1. 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. Apply scientific reasoning to investigate questions, and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.

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.

Laboratory Topics & Major Themes:

There will be formal laboratory reports to be completed in science journals as well as ONE lab practical exam per six weeks.

Laboratory Safety | Experimental Design | Scientific Measurement | The Microscope
Data Collection and Analysis | The Cell | Diffusion / Osmosis | Enzymes | Chlorophyll
Aerobic Cellular Respiration | 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)

6 Week Grading Policy:

50%- LECTURE AND LAB Exams, CLASS Projects, STEAM Design Challenges

50%- Quizzes & Formal Laboratory Reports

100%- Total Grade

*Homeworks and other class activities not listed above are mandatory for success on quizzes and tests as they reinforce tested material.

Units/Midterms/Final Exams:

The mid-term and final semester exams may be administered in form of a standard test with MCQ, short answer, or essay questions, a lab practical or an experimental design challenge based on concepts learned in the semester. **Students WILL NOT be given a list of answers to memorize for unit, midterm, or final exams.** The most important part of the test review process is studying information provided on Google Classroom and science journals (from activities, labs, and lectures in class) and understanding project applications. It is recommended that students **KEEP ALL WORK** during the semester for semester exam study purposes. *NOTE: Students must take a Pre and Post test at the beginning and end of the semester.

Absences and Make-up Work -

This course will follow Pleasant Grove High School attendance policy.

(school function related and non-school function related):

All absent work is due by the end of the week following your absence. All information will be posted on Google Classroom, however students should always check with the instructor following any absence.



At least two test grades will be given each six weeks. Since tests count 50% of the student grade, it is very important that the student do his or her best and be prepared and present for each test. No retakes are allowed for any assignment, quiz or test. If a student is not present on the day a test is administered or lab conducted, an alternative test or lab activity may be taken or assigned. These must be done in the appropriate time frame based on district policy. Alternatives will cover the same material; however, number of questions and format is at the teacher's discretion. Students are welcome to complete assignments in advance. Students are responsible for communicating with the instructor regarding alternative assignments.

THERE WILL BE NO RETAKES ON ANY TEST, PROJECT, QUIZ, OR OTHER ASSIGNMENT.

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 subject to disciplinary action according to Pleasant Grove High School's discipline policy. **No music players, texting or talking on a phone or messaging device without instructor permission.**

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> or in the Pleasant Grove ISD Student Handbook.

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 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 Pleasant Grove student email, Remind, and Google Classroom as means of communication. All students need to use their campus email 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 (posted on Google Classroom) 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.

Student Name (PRINT First & LAST NAME)

Legal Signature

Parent Name

Legal Signature

TC Course Number / Section Number

Date