TEXARKANA COLLEGE

Syllabus: Biology I for Science Majors - Lecture

Adapted from Prof. Mark Storey

Course Number: BIOL 1306 Semester & Year: Fall 2016

Instructor Information

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Office Hours:

Textbook Information

- Required Download Biology Openstax Rice University (FREE downloadable PDF format) https://openstaxcollege.org/textbooks/biology
- Recommended Alternative Textbook <u>Principles of Life</u>. Hillis, Sadava, Heller and Price 1st ed.(2012) <u>Sinauer Assoc Inc and W.H. Freeman and Co.</u> ISBN 978-1-4292-5721-3
 - o Free textbook website: http://www.whfreeman.com/hillis1e

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 methods of inquiry used by scientists.
- 3. Identify the basic requirements for life and the properties of the major molecules 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/ Exams - Biology 1306 Fall 2016

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 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 6: Pathways that Harvest and Store Chemical Energy

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 thee units and a comprehensive final exam, for a total of four exams. 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.

Grading Scale

Semester Grade	Course Average
A	89.5-100
В	79.5-89.4
С	69.5-79.4
D	59.5-69.4
F	59.4-below

Class Schedule

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
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 1		
EXAM II Unit		
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
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 2		
EXAM III Unit		
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
Controlling Genetic Expression	Chapter 11 Regulation of Gene Expression	Chapter 16 Gene Expression

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 no 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.

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 you will be dropped (W) from the course. **NO EXCEPTIONS**.

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 after the door has been closed 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 or 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, **may be marked as absent.**

If situations make it necessary for missing class <u>you are still responsible for all the work you missed during class</u>. 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 <u>if you withdraw before the official deadline</u>.

Make-up Policy

No makeups are given for lecture exams in this course. Any portion (multiple choice or essay part) of the exam **cannot** be made up **if it was originally administered in the TC Testing Center**, as this portion of exam was made available for an extended period of time (normally one (1) week).

Written assignments in lecture 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: amorris@atlisd.net

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.

<u>All electronic devices</u> (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.

Student Name (PRINT First & LAST NAME)
Legal Signature
Legal Signature
TC Course Number / Section Number
TC Course Number / Section Number
Date