TEXARKANA COLLEGE

**Syllabus:** Biology 1 & Biology Lab 1 (Dual Credit)
**Course Number:** BIOL 1308 & BIOL 1108
**Semester & Year:** Fall 2023
**Instructor Information**

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**Textbook Information**

- This semester for Concepts of Biology, we will be using an open source textbook developed by Rice University. You can purchase a copy of the textbook at the TC Bookstore, or you can download it as a PDF to your computer, tablet, phone, etc. for free from the Rice OpenStax website. http://openstaxcollege.org/textbooks/concepts-of-biology.

**NOTICE OF ASYNCHRONOUS LEARNING FOR FULL CONTACT HOURS:**
When taking these classes on the TC campus, students have a total of 96 contact hours: 48 each for lecture and lab. Due to our high school schedule falling short with a total of 63 contact hours for the Fall semester, students will be expected to complete the remaining 33 hours outside of the regular class time. The outside hours should be a minimum of two hours per week. These outside hours may include, but are not limited to - completing lecture notes, studying for examinations, researching, conducting laboratory simulations, analyzing case studies, watching videos, writing essays, and completing virtual labs. Students can be expected to complete these hours before school, after school, and while at home. A log sheet will be provided and students will be required to document hours completed outside of class.

**Student Learning Outcomes for BIOL 1308**
Upon successful completion of this course, students will:

1. Distinguish between prokaryotic, eukaryotic, plant and animal cells, and identify major cell structures.
2. Identify stages of the cell cycle, mitosis (plant and animal), and meiosis.
3. Interpret results from cell physiology experiments involving movement across membranes, enzymes, photosynthesis, and cellular respiration.
4. Apply genetic principles to predict the outcome of genetic crosses and statistically analyze results.
5. Describe karyotyping, pedigrees, and biotechnology and provide an example of the uses of each.
6. Identify parts of a DNA molecule, and describe replication, transcription, and translation.
7. Analyze evidence for evolution and natural selection.

Student Requirements for Completion of the Course and Due Dates
*Dates are subject to change*

| Lecture Exams | Chapters Covered | Date |
|---|---|---|
| Exam 1 | Chapters 1-2 | Week 3 |
| Exam 2 | Chapters 3-4 | Week 6 |
| Exam 3 | Chapters 5-6 | Week 9 |
| Exam 4 | Chapters 7-8 | Week 12 |
| Exam 5 | Chapters 9-11 | Week 15 |
| Comprehensive Final | Chapters 1-11 | Finals Week |

**Student Learning Outcomes for BIOL 1108**
Specific laboratory objectives required by the Texas Higher Education Coordinating Board and available from the Lower-Division Academic Course Guide Manual are:

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 scientific investigations.
4. Distinguish between prokaryotic, eukaryotic, plant and animal cells, and identify major cell structures.
5. Identify stages of the cell cycle, mitosis (plant and animal), and meiosis.
6. Interpret results from cell physiology experiments involving movement across membranes, enzymes, photosynthesis, and cellular respiration.
7. Apply genetic principles to predict the outcome of genetic crosses and statistically analyze results.
8. Identify the importance of karyotypes, pedigrees, and biotechnology.
9. Identify parts of a DNA molecule, and describe replication, transcription, and translation.
10. Analyze evidence for evolution and natural selection.

**Student Assessment**

- The course will be broken up into unit topics. A variety of classwork and homework activities will be assigned during each unit for practice or for a deeper understanding of content. Graded work from these assignments will be classified as daily work. At least one lab will be conducted for each unit. Each unit will conclude with a test.
- High school grades will be reported each six weeks and calculated according to the Hooks High School Science Department grading policy: 30% unit tests, 30% daily work, 40% project/lab.
- The final grade for the Texarkana College course CHEM 1311 will be determined at the end of the course (December) and will be calculated by the following: 45% daily work, 45% unit tests, 10% final exam.

**Grading Scale for dual credit course**:

| Grade | % |
|---|---|
| **A** | 90-100 |
| **B** | 80-89 |
| **C** | 70-79 |
| **D** | 60-69 |
| **F** | 59-below |

**Course Overview**

| Topic | Tentative Dates Covered | OpenStax *Chemistry 2e* section |
|---|---|---|
| Matter | 8/16-8/24 | 1.1-1.3 |
| Measurements | 8/26-9/8 | 1.4-1.6 |
| Atomic Structure | 9/12-9/29 | 2.1-2.3, 6.1-6.5 |
| Periodic Table | 10/3-10/7 | 2.5, 6.5 |
| Chemical Formulas | 10/11-10/27 | 3.1-3.4 |
| Chemical Bonds | 10/31-11/10 | 2.5-2.7, 7.1-7.6 |
| Chemical Reactions | 11/14-12/5 | 4.1-4.5 |
| Gas Chemistry | 12/7-12/13 | 9.1-9.6 |

**Laboratory**

- BIOL 1108 is a biology laboratory course that parallels the concepts covered in BIOL 1308.
- Students must follow all safety guidelines discussed in class. Failure to follow safety rules will result in removal from the lab and alternative assignments will be provided until lab privileges are returned to the student.
- Not all labs will be able to be completed during class time. Parts of some labs must be done outside of class, including the pre and post lab assignments. Some labs require the students to come in at times other than normal class times to collect data. It is the students/groups responsibility to ensure this is done.
- If you are absent for any reason, labs will have to be made up before or after school.
- Labs will have a completion date provided. Labs will not be accepted late.

**Tutoring:** Texarkana College Student Support Services has tutors available to assist chemistry students that need help with the course. They can help with the completion of homework assignments and laboratory assignments. These tutors are typically available in the Chemistry Building. Schedules will be posted.

**GENERAL TEXARKANA COLLEGE COURSE POLICIES**

**Cell Phone Policy:** All cell phones will be turned off and kept out of sight in class. If any phones are out while testing, I will assume you are cheating. There will be no talking on phones or texting while lecture and discussion is taking place. If you cannot abide by this policy, you will be asked to leave.

**Attendance Policy:** You are not required to attend lecture sessions. Success in college level courses is often closely correlated with classroom attendance and participation. The role will be called and a list of those absent maintained. If you make a grade of "F" for whatever reason the last day you attended class based on the class role will be recorded on the final grade sheet. This may impact your scholarships and future funding. It is possible that you will be asked to return money based on this date. Attendance and completion of laboratory assignments is mandatory. Students who miss more than three laboratories will be dropped from the class unless other arrangements are made with the laboratory instructor.

**Classroom Behavior:** In general, lectures and laboratories are conducted in a rather open fashion with adequate opportunity for students to interact with their instructors and with each other about biology. Excessive talking between students or other behavior that becomes a distraction to the instructor or class members will result in the student(s) being asked to leave the class. Please mute any electronic devices before attending course lectures. General behavior for students on campus is reviewed in the Texarkana College Catalogue and the Texarkana College-Student Handbook (https://www.texarkanacollege.edu/)

**Missed Examinations:** If you know in advance that you are going to miss an examination it is best to arrange with the instructor to take the examination early. If you miss an examination for reasons beyond your control, you should contact the instructor as soon after as feasible to make arrangements to take the examination. Examinations are typically graded promptly and returned. It is best to take a missed examination prior to the original being returned to the class for review. In cases of extended illness or disaster, accommodations can usually be made.

**Missed Laboratory:** Students who know they will miss laboratory should meet with the instructor to see if attending a laboratory on a different day of the week is feasible. Instructors are generally willing to help students who notify them promptly of their attendance problems and keep them up to date. Students who miss more than three laboratory sessions will be dropped from the course unless they have made other arrangements with the instructor.

**Incomplete Grade Policy:** Incompletes can be given if you complete 75% of the course work with at least a 70% average. Students who want an incomplete

grade should meet with the instructor and make a request for the grade and have a plan for completing the required work.

**Withdrawal Policy:** If you wish to drop the class, please do so yourself. The instructor will not be responsible, unless you make a specific request prior to the drop deadline. The drop deadline for each semester can be found in the Texarkana College Catalogue (https://www.texarkanacollege.edu/). After the drop deadline the student that fails to complete the class with a satisfactory grade will receive a grade of "F". The student's final attendance date will be reported with the grade of "F".

**Testing Center Policy:** During the semester you may be asked to take examinations in the Texarkana College Assessment and Testing Center located in Room 11 of the Business and Computer Technology Building. The hours of operation, policies and procedures for the testing center can be found on the Texarkana College Web Page at https://www.texarkanacollege.edu/. The policies of the Texarkana College Assessment and Testing Center must be studied and closely followed.

**Student Services:** Student Services is located on the first floor of the Administration Building and offers many services to TC students. These include campus housing, student handbook, awards and recognition, student insurance, and scholarships. The web address is https://www.texarkanacollege.edu/.

**Student Support Services:** Student Support Services helps students by offering career information, tutoring, study skills, and college transfer information. Student Support Services is located in Room 106 of the Career Education Center. The Web page for Student Support Services can be found at https://www.texarkanacollege.edu/.

**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 the TC Testing Center, as well as off-campus classrooms or lab sites. For more information students should refer to the TC 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 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, present it to the instructor 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 accommodations. See Texarkana College Catalogue at: https://www.texarkanacollege.edu/

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