Biology for Non-Science Majors I Online Laboratory  
BIOL 1108-220 Fall 2021

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Office Hours: M 11-noon; T 11:30-1:30; F 10-noon, or by appointment  
Class Meeting Time and Place: Online on Brightspace D2L

Course Description: This laboratory-based course accompanies BIOL 1308 Biology for Non-Science Majors I. Laboratory activities will reinforce the fundamental principles of living organisms, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Study and examination of the concepts of cytology, reproduction, genetics, and scientific reasoning are included.

Number of credit hours: 1  
Credit Hour Justification: Students can expect to spend 2 – 4 hours completing each laboratory exercise and an additional 2 – 4 hours writing up the results of each laboratory exercise to successfully complete this course.

Prerequisite: None  
Co-requisite: BIOL 1308 Biology for Non-Science Majors I (lecture)

Attendance: There are no required class meetings to attend.

Text and Materials: Lab kits are purchased from Carolina Biological Supply, Distance Learning, and instructions for purchase are posted in D2L. Lab kits contain all lab materials. Student worksheets and lab manuals are posted on D2L. All lab reports should be submitted as pdf documents to avoid compatibility issues.

Course Requirements: To complete Biology I for Non-Majors (!) you must be enrolled in BIOL 1308 & BIOL 1108 in the same semester. Your laboratory grade is determined by weekly assignments and quizzes. Your lecture instructor will calculate your final course grade using your lab average as follows: lab avg. = 25% lecture avg. = 75%

Program Learning Outcomes: Each course objective and student learning outcome listed below corresponds to the Biology Department PLO 1, to develop knowledge of biological concepts.

Student Learning Outcomes: Upon successful completion of this course, students will:

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. Describe the characteristics of life.
5. Explain the methods of inquiry used by scientist.
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.
General Education Core Curriculum: The Texas Higher Education Coordinating Board has identified six core learning objectives: Critical Thinking Skills, Communication Skills, Empirical and Quantitative Skills, Teamwork, Personal Responsibility, and Social Responsibility. SFA is committed to the improvement of its general education core curriculum by regular assessment of student performance on these six objectives.

By enrolling in Biology for Non-Majors I (lab) you are also enrolling in a Core Curriculum Course that fulfills the Empirical and Quantitative Skills requirement. You will see this course on your D2L list. At one point during the semester, you may receive an assignment that fulfills both the requirements of this course and the needs of Stephen F. Austin State University’s Core Curriculum Assessment Plan with the Texas Higher Education Coordinating Board. The chart below indicates the core objectives addressed by this course, the assignment(s) that will be used to assess the objectives in this course.

<table>
<thead>
<tr>
<th>Core Objective</th>
<th>Definition</th>
<th>Course Assignment Title</th>
<th>Date Due in D2L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empirical and Quantitative Skills</td>
<td>To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.</td>
<td>Inheritance Laboratory Exercise</td>
<td>To Be Determined</td>
</tr>
</tbody>
</table>

More information and instructions will be provided concerning submission of this assignment later in the semester.

Academic Integrity (A-9.1): Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism. I expect everyone to do her own, original work. This includes all exams, quizzes, and assignments. We will take appropriate disciplinary action, as described in the University Student Handbook, against anyone that does not comply with this policy.

Definition of Academic Dishonesty
As stated in the university handbook:
"Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one’s own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit."

Acceptable Student Behavior: Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including online, electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.
Students with Special Needs: Students who require special accommodations for this course will be provided such accommodations within established university guidelines. Students who are requesting support services from SFA are required to submit documentation through the Office of Disability Services to verify eligibility for reasonable accommodations; the institution must review and evaluate that documentation. To obtain disability related accommodations and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided.

Please note that the only way you can get extra time to finish work for the course is to be verified by ODS that you are eligible to receive this accommodation.

Mental Health: SFASU values students' mental health and the role it plays in academic and overall student success. SFA provides a variety of resources to support student's mental health and wellness. Many of these resources are free, and all of them are confidential.

On-campus Resources:
SFASU Counseling Services
www.sfasu.edu/counselingservices
3rd Floor Rusk Building
936-468-2401

SFASU Human Services Counseling Clinic
www.sfasu.edu/humanservices/139.asp
Human Services Room 202
936-468-1041

Crisis Resources:
Burke 24-hour crisis line 1(800) 392-8343
Suicide Prevention Lifeline 1(800) 273-TALK (8255)
Crisis Text Line: Text HELLO to 741-741

Expectations for Students in BIO 1108 online

Technical Preparation: The technical nature of the course demands preparation on your part. Students should submit all assignments early enough to account for technical difficulties. In the event of a technical catastrophe (e.g. the university's main fiber optic line gets severed, a hurricane floods telecommunications hubs in Houston, the D2L server goes down, Snowmageddon occurs, etc.), please do not inundate the Biology Department with phone calls. I will communicate with the class as soon as is technically possible.

Technology Requirement: As you have elected to enroll in an online course, it is your responsibility to acquire a consistent, stable, dependable computer and internet connection with which to complete the assignments for the course by the deadlines indicated on the Semester Calendar. It is not the responsibility of the instructor to provide additional time for assignments or exams or an alternative means of completing the course due to technological issues on your part. Just as it is your responsibility to acquire and maintain adequate transportation to attend a face-to-face course, it is your responsibility to secure the technological means to participate in and complete this course. If you are having technical issues with D2L, please call the student help line at 936-468-1919 or e-mail at d2l@sfasu.edu. Live support is available from 8 am CST to 5 pm CST, Monday through Friday. Additional information can be found on the SFA online website. For many labs, a device (smart phone, digital camera, etc,) will be required to photograph results and progress for submission.

You should be logging onto D2L on a regular basis. In addition to the detailed course calendar, all assignments are entered into the D2L calendar. This is NOT a self-paced course.

Due dates are firm. Late assignments are not accepted. Once a quiz or an assignment’s dropbox is closed, it will not be re-opened. No assignments will be accepted through email. They must be uploaded to the D2L dropbox. Special arrangements for submitting work early or late due to University sponsored trips/events need to be made in advance.
**Grade Determination:** The 25 points available for each lab will be added together to determine a total score out of 275 points available for the entire lab course. A percentage score will be calculated from these points and reported to your lecture instructor to determine your overall grade in the course. Your final grade for the lab will be the same as your lecture grade.

<table>
<thead>
<tr>
<th>Course Requirement</th>
<th>Points/Lab</th>
<th>Total Points/11 Labs</th>
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<tbody>
<tr>
<td>Lab Reports w/photos</td>
<td>20</td>
<td>220</td>
</tr>
<tr>
<td>Lab Quizzes</td>
<td>5</td>
<td>55</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>275</strong></td>
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</tbody>
</table>

Final Grade = Lab grade x 0.25 + Lecture grade x 0.75

**BIOL 1108 Online Fall 2021 Schedule**

All quizzes must be taken and all lab reports uploaded to the D2L dropbox by 11:00pm on their due dates. Once the dropbox or quiz closes, it will not be reopened. **No work will be accepted through email.**

<table>
<thead>
<tr>
<th>Laboratory Activity</th>
<th>Lab Opens in D2L</th>
<th>Lab Due Date</th>
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<tbody>
<tr>
<td>Lab 1: PPE and Safety</td>
<td>Aug 23</td>
<td>Sep 3</td>
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<tr>
<td>Lab 2: The Scientific Method</td>
<td>Aug 23</td>
<td>Sep 10</td>
</tr>
<tr>
<td>Lab 3: Biological Molecules and Enzymes</td>
<td>Sep 10</td>
<td>Sep 17</td>
</tr>
<tr>
<td>Lab 4: Cell Structure and Function Osmosis</td>
<td>Sep 17</td>
<td>Sep 24</td>
</tr>
<tr>
<td>Lab 5: Cellular Respiration</td>
<td>Sep 24</td>
<td>Oct 1</td>
</tr>
<tr>
<td><strong>This one has a 2 day set up before performing the experiment, so don’t wait to start.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab 6: Photosynthesis and Pigments</td>
<td>Oct 1</td>
<td>Oct 8</td>
</tr>
<tr>
<td>Lab 7: Mitosis and Meiosis Simulation</td>
<td>Oct 8</td>
<td>Oct 15</td>
</tr>
<tr>
<td>Lab 8: Cell Cycle Mitosis: Virtual Microscope</td>
<td>Oct 15</td>
<td>Oct 22</td>
</tr>
<tr>
<td>Lab 9: Mendelian Inheritance</td>
<td>Oct 22</td>
<td>Nov 5</td>
</tr>
<tr>
<td><strong>This one MUST be started on time!</strong></td>
<td></td>
<td></td>
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<tr>
<td>Lab 10: Blood Typing</td>
<td>Nov 5</td>
<td>Nov 12</td>
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<tr>
<td>Lab 11: Introduction to Biotechnology- Gel Electrophoresis</td>
<td>Nov 12</td>
<td>Nov 19</td>
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</tbody>
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