

BIO 1408 (4:3:3)

General Biology for Non-Science Majors I

Department of Biology  
Division of Arts and Sciences  
SOUTH PLAINS COLLEGE  
Levelland Campus

Dr. Eric Niederhauser  
Fall 2024

**Course Information**  
**Biology I for Non-Science Majors (BIOL 1408)**  
**Fall 2024**

INSTRUCTOR: Dr. Eric Niederhauser

OFFICE PHONE: 806 716-2321

EMAIL: [eniederhauser@southplainscollege.edu](mailto:eniederhauser@southplainscollege.edu). Please include the course number (1408) in the subject. I generally try to respond promptly to emails. Evening or Saturday response times may be delayed. I respond to emails received on Sundays on Monday.

OFFICE HOURS: Mon, Tue, and Wed: 11:00 – Noon; Wed: 2:30 – 3:30; Thu: 1:30-2:30; Friday: 9:00 – 11:00.

**Course Description:** This general biology course is devoted to exploring the properties, structures and functions shared by all organisms with an emphasis on humans. These properties involve: cells, chemistry, energy, genetics, evolution, and interactions. We will also learn about science and the process of scientific discovery.

**Course Implementation:**

PREREQUISITE: None. CREDIT: Four semester hours

RECOMMENDED TEXT: Campbell, *Essential Biology with Physiology*, 6<sup>th</sup> Ed. by Simon, et al.

REQUIRED LAB MANUAL: Download from Blackboard and print. You must bring it to lab.

**Blackboard:** Current grades, course information, lecture notes, links etc. will be available on Blackboard, accessed through <https://southplainscollege.blackboard.com>. You are responsible for checking Blackboard regularly.

**Email:** I may send emails to your SPC email address periodically throughout the semester. You are responsible for any information that is sent to your SPC email by me or the college, so please check it regularly.

**Grading:**

EXAMS: Five exams are given during the semester covering both lecture and lab. The exams are announced in advance and primarily cover lecture material but may include information from lab. The exams are primarily multiple choice but may include fill-in-the blank, short answer or essay questions. The final exam is comprehensive.

Missed exams: If you know in advance that you will be absent on an exam date, notify me ahead of time, it MAY be possible to take the exam at an alternate time. If you unexpectedly miss an exam and do not contact me within 24 hours, I will not consider a makeup exam and you will receive a zero for the exam.

IN-CLASS QUIZZES: Most lectures will begin with a quiz. If you are late for class, you will not get credit for questions missed. There will be no in-class quiz makeups but three of the lowest in-class quiz grades will be dropped. Quizzes will use a remote clicker system.

LAB GRADES: Based on lab attendance and assignments.

ASSIGNMENTS: Graded assignments may be assigned. I will not accept them late.

**GRADING SUMMARY**

| Grade Type             | Percentage of Grade |
|------------------------|---------------------|
| Exams                  | 60 %                |
| In-Class Quizzes       | 20 %                |
| Lab Grades/Assignments | 20 %                |

*Grading scale:* Final semester average 90-100 = A; 80-89 = B; 70-79 = C; 60-69 = D; <60 = F.

*Last Day to Drop the Course:* Dec 4, 2024

## Policies, Procedures and Rules

This course will be conducted according to the policies and procedures of the South Plains College Student Handbook and General Catalog.

**Attendance Policy:** Attendance is mandatory. Students are responsible for all information discussed during absences from class - regardless of the reason.

When absences become excessive and, in the opinion of the instructor, minimum course objectives cannot be met, the student will be withdrawn from the course. Any student with 4 absences or tardies will be withdrawn from the class.

Once a week, class meetings consist of lecture period AND a lab period; consequently, being absent from either class OR lab will count as an absence for the day and any work missed will receive a grade of zero. Labs cannot be made up.

**Tardy Policy:** Arriving to class late is disruptive. If you are late, please come in quickly and quietly take your seat. A student who is consistently tardy will be withdrawn from the class. Let me know if there is a problem or if you know you will be late. Barring emergency, there is no excuse for being tardy to lab. If you are late for lab, you will lose participation credit for the lab.

**Classroom Conduct:** To create an effective learning environment, respect must be shown to your fellow students and to the instructor. Disruptive and disrespectful behavior will not be tolerated.

Disruptive and disrespectful behavior includes:

- Cell phone use. **Cell phones should not be in view at any time.**
- Earbuds in your ear during lecture or lab.
- Use of other electronic devices including laptops. Research shows that taking notes by hand is more effective. Tablets used horizontally on the table for note taking with a stylus are OK. I reserve the right to allow laptop use on an individual basis.
- Leaving class during lecture. **If you will need to leave early let me know.**
- Sleeping in class or lab.
- Eating in lab. Discrete food consumption in lecture is tolerated.
- Failure to follow general instructions.
- Talking out of turn, cursing, inappropriate gestures etc.

**You will receive a zero for the day's quiz for disruptive behavior** and may be asked to leave the classroom. If the poor behavior is deemed excessive the student may be withdrawn from the course.

**Academic Integrity:** The attempt of any student to cheat or present as her/his own any work, which she/he has not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offender liable to serious consequences, possibly suspension.

Examples of cheating and dishonesty include (but are not limited to): plagiarism, illegal possession of examinations, the use of unauthorized notes or texts during an examination or quiz, obtaining information during an exam from the exam paper of another student, assisting others to cheat, alteration of grade records, illegal entry or unauthorized presence in an office.

You must use your own words on exams.

**Lab Safety:** Each student will be informed/trained on the "Chemical Hygiene Plan (CHP) for Laboratories at South Plains College" during the first week of the semester. Each student will be required to acknowledge receipt of this information and be required to follow all procedures outlined by the instructor and/or staff of South Plains College.

**Material Safety Data Sheets (MSDS):** These data sheets detail any potential hazards associated with the chemicals used in the laboratory. The MSDS notebook is located in room 146 of the science building. All students are encouraged to read about the chemicals used in the lab in the MSDS notebook. Please ask the instructor if you need assistance.

For information regarding official South Plains College statements about

- Intellectual exchange
- Disabilities
- Non-discrimination
- Title V Pregnancy Accommodations
- CARE Team
- Campus Concealed Carry

please visit <https://www.southplainscollege.edu/syllabusstatements/>

### Niederhauser General Weekly Schedule

|       | Mon             | Tue             | Wed             | Thu             | Fri          |
|-------|-----------------|-----------------|-----------------|-----------------|--------------|
| 8 am  |                 |                 |                 |                 |              |
| 9     |                 |                 |                 |                 | Office Hours |
|       |                 | <b>1408 001</b> |                 | <b>1408 002</b> |              |
| 10    |                 | <b>Lecture</b>  |                 | <b>Lecture</b>  |              |
|       |                 | S83             |                 | S83             |              |
| 11    | Office Hours    | Office Hours    | Office Hours    | 1408 002        |              |
|       |                 |                 |                 | <b>Lab</b>      |              |
| 12 pm |                 |                 |                 | S189            |              |
| 1     | <b>1406 002</b> |                 | <b>1406 002</b> |                 |              |
|       | <b>Lecture</b>  |                 | <b>Lecture</b>  | Office Hours    |              |
| 2     | S83             |                 | S83             |                 |              |
|       | 1406 002        |                 | Office Hours    |                 |              |
| 3     | <b>Lab</b>      |                 |                 |                 |              |
|       | S197            |                 |                 |                 |              |
| 4     |                 |                 |                 |                 |              |
| 5     |                 |                 |                 |                 |              |

|   | <b>1408 Fall 2024 Tentative Lecture Schedule</b> |                                      | <b>Thursday LAB Schedule</b> |  |
|---|--|--------------------------------------|------------------------------|--|
| <b>Unit</b>                                 | <b>Date</b>                                      | <b>Topic</b>                         | <b>Week #</b>                | <b>Topic</b>   |
| Introduction,<br>Building<br>Blocks of Life | Tue, Aug 27                                      | Welcome/Intro - What is Life?        | 1                            | Safety/ Metric System/<br>Data Analysis                    |
|   | Thu, Aug 29                                      | Life Organized/Chemistry for Biology |                              |  |
|   | Tue, Sep 3                                       | Chemistry for Biology                | 2                            | Microscope Intro/ Experimental<br>Design/ Daphnia on Drugs |
|   | Thu, Sep 5                                       | Molecules of Life: Carbs, Lipids     |                              |  |
|   | Tue, Sep 10                                      | Molecules of Life: Protein, DNA      | 3                            | Organic Molecules  |
|   | Thu, Sep 12                                      | Catch up and Review                  |                              |  |
|   | Tue, Sep 17                                      | <b>EXAM 1</b>                        | 4                            | Diffusion and Osmosis                                      |
| Thu, Sep 19                                 | Cell Structure and Function                      |                                      |                              |  |
| The Working<br>Cell                         | Tue, Sep 24                                      | Cell Division (Mitosis)              | 5                            | Cells/Mitosis  |
|   | Thu, Sep 26                                      | Cell at Work - Energy and Enzymes    |                              |  |
|   | Tue, Oct 1                                       | Cellular Respiration                 | 6                            | Respiration/ Photosynthesis                                |
|   | Thu, Oct 3                                       | Photosynthesis                       |                              |  |
|   | Tue, Oct 8                                       | <b>EXAM 2</b>                        | 7                            | Mitosis vs Meiosis / Karyotypes                            |
|   | Thu, Oct 10                                      | Meiosis                              |                              |  |
| Genetics                                    | Tue, Oct 15                                      | Patterns of Inheritance Mendel       | 8                            | Drosophila Start/ Genetic<br>Problems                      |
|   | Thu, Oct 17                                      | Inheritance - Beyond Mendel          |                              |  |
|   | Tue, Oct 22                                      | Structure of DNA                     | 9                            | Genetic Problems   |
|   | Thu, Oct 24                                      | Function of DNA/Viruses/Mutation     |                              |  |
|   | Tue, Oct 29                                      | <b>EXAM 3</b>                        | 10                           | DNA Structure/Protein Synthesis                            |
|   | Thu, Oct 31                                      | How Genes are Controlled             |                              |  |
| DNA and<br>Evolution                        | Tue, Nov 5                                       | Cloning/Gene Cancer                  | 11                           | Drosophila Count   |
|   | Thu, Nov 7                                       | DNA Technology                       |                              |  |
|   | Tue, Nov 12                                      | DNA Technology Applications          | 12                           | Genes in a Bottle/ Micropipette<br>Use                     |
|   | Thu, Nov 14                                      | Evolution by Natural Selection       |                              |  |
|   | Tue, Nov 19                                      | Evolution Evidence                   | 13                           | Natural Selection/ Gel<br>Electrophoresis Intro            |
|   | Thu, Nov 21                                      | Ecology Intro. Ecosystems (On final) |                              |  |
| Ecology                                     | Tue, Nov 26                                      | <b>EXAM 4</b>                        | 14                           | No Lab   |
|   | Thu, Nov 28                                      | <b>Thanksgiving Break</b>            |                              |  |
|   | Tue, Dec 3                                       | Ecology Case study 1                 | 15                           | DNA Fingerprinting   |
|   | Thu, Dec 5                                       | Ecology Case study 2                 |                              |  |
|   |  | Dec 09-12                            | <b>Final EXAM</b>            |  |