**Hill College**

**112 Lamar Drive**

**Hillsboro, Texas 76645**

**COURSE SYLLABUS**

**Course Prefix and Number Course Title**

BIOL1108 **Section: 03WC** **Semester:**  Spring 2023

**Instructor:** Donna Dunnahue

**Contact:** Office: Hillsboro Science Building Room 213

 Office hours: M 8:00 to 9:30, 12:30 to 2:30

 T 7:30 to 8:00, 9:30 to 11:00

 R 7:30 to 8:00, 9:30 to 12:30, 4:00 to 5:00

Office Phone: 254-659-7500

Email: ddunnahue@hillcollege.edu

**Catalog Description:**

This laboratory-based course accompanies BIOL 1408, Biology for Non-Science Majors I. Laboratory activities will reinforce a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction.

For students in this course who may have a criminal background, please be advised that the background could keep you from being licensed by the State of Texas. If you have a question about your background and licensure, please speak with your faculty member or the department chair. You also have the right to request a criminal history evaluation letter from the applicable licensing agency.

Lecture Hours: 3 Lab Hours: 3 Semester Hours: 4

Prerequisite: None

Corequisite: BIOL1408

Introduction and Purpose:

This course is meant to introduce students to the world of biology. It will teach them the basics of life and science, as well as discuss genetics and biotechnology.

The course can be used to fulfill core requirements for graduation and/or transfer to senior institutions.

Instructional Materials:

Lab protocols are posted in Schoology. Print out each lab (color print for labs with pictures is recommended) and keep in a binder. Students in the online section will need to pick up a lab kit on campus.

Supplies & Materials: Computer access

Objectives/Student Learning Outcomes:

At the completion 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 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.

Method of Instruction:

This course will be taught face-to-face and by various distance learning delivery methods.

Audio-visual materials and computer-based technology will be used when appropriate. Students will be shown how to use a calculator where appropriate.

Methods of Evaluation:

Grades in this course will be based on the following evaluative criteria:

The average of the course curriculum will make up \_55\_% of the students’ grades. The laboratory will make up \_25\_% of the students’ grades. The final exam will make up \_20\_% of the students’ grades.

For the lab: Regular labs are worth 50 points. Practicals are worth 100 points. The lab report is worth 200 points overall (50 points for the outline, sources, and graph, 50 points for peer-review, and 100 points for the full lab report). Attendance and participation in each lab is worth 50 points for the semester. There are 1000 points possible overall.

Letter grades for the course will be based on the following percentages:

90-100% A

80-89% B

70-79% C

60-69% D

Below 60% F

Course Policies:

1. No food or drink allowed in the lab. Follow safety protocols while in the lab.

1. Free tutoring is available to Hill College students. Please visit <https://www.hillcollege.edu/Student/Advising/Tutoring.html> for more information.
2. If a student participates in any behavior that can be characterized as academic dishonesty (including cheating on an exam or assignment, or plagiarizing a written paper), then he/she will be reprimanded by the instructor, and he/she will receive a 0 on the assignment. If the behavior occurs again, then the student will be referred to the Dean.
3. Student conduct outlined in the policy manual (found here:  https://pol.tasb.org/Policy/Section/649?filter=F) will be enforced in this class. The complaint process is also described in the policy manual. Plagiarism is also described in the policy manual.
4. Cell phones should be turned off, or placed on silent mode during class time. Rules for other electronic devices, including but not limited to earbuds, headphones, and smartwatches will be discussed by the instructor. Distractions can pose a threat to your safety and the safety of others around you in a science lab.
5. You must complete one asignment before the census date to be counted as attending.

Course Outline:

Lab 1: Scientific method

Lab 2: Basic Chemistry

Outline due.

Lab 3: Cells and Microscope. Sources, Table/Graph due for lab report.

Lab 4: Movement across membranes and enzymes. Lab report due.

Lab 5: Fermentation. Peer review of lab reports.

Lab 6: Photosynthesis. Full lab report due.

Practical 1

Lab 7: Cell Cycle

Lab 8: Genetics

Lab 9: Karyotypes and Biotech

Lab 10: DNA and protein synthesis

Lab 11: Evolution

Final Practical

Disabilities/ADA

Reports of discrimination based on disability may be directed to the ADA/Section 504 coordinator.  The College District designates the following person to coordinate its efforts to comply with Title II of the Americans with Disabilities Act of 1990, as amended, which incorporates and expands the requirements of Section 504 of the Rehabilitation Act of 1973, as amended:

Name:           Lizza Trenkle

Position:       Vice President Student Services

Address:       112 Lamar Drive, Hillsboro, TX  76645

Telephone:  (254) 659-7601

Students with qualified and documented disabilities may request accommodations which will enable them to participate in and benefit from educational programs and activities.  Students should contact the Academic Advising and Success Center for more details at 254-659-7650 for Hill County Campus, 817-760-5650 for Johnson County Campus, or 817-295-7392 for Burleson Center.

Title IX

Reports of discrimination based on sex, including sexual harassment or gender-based harassment, may be directed to the Title IX Coordinator.  The College District designates the following person to coordinate its efforts to comply with Title IX of the Education Amendments of 1972, as amended, and related state and federal laws:

Name:          Jamie Jaska

Position:       Director of Human Resources

Address:       112 Lamar Drive, Hillsboro, TX  76645

Telephone:   (254) 659-7731

Email:          jjaska@hillcollege.edu

Webpage:   [TitleIXcontact (hillcollege.edu)](https://www.hillcollege.edu/Faculty_Staff/HR/Title9.html)

**Statement of Nondiscrimination:** The College District prohibits discrimination, including harassment, against any employee on the basis of sex. Retaliation against anyone involved in the complaint process is a violation of College District policy and is prohibited.

(07/12/2022)

The information in this syllabus is subject to change.

Signature Page

Please read the statement below and sign the appropriate lines within and at the bottom of the page.

I \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ do acknowledge that I received and/or have access to a copy of the course syllabus.

I understand the course requirements.

I have also been shown or provided the link for the policy manual and I understand that I am responsible for my behavior and will be held accountable for my actions.

I understand that I will follow the policy manual regarding student conduct.

I further understand that if I have a complaint or grievance relating to this class, I should follow the chain of command according to the Hill College Policy.

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Signature Date