BIOLOGY 10L: Introduction to Life Science Lab Online

Spring 2024

Instructor: Ms. Smith Bush

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Lab: Online and asynchronous

Office Hours: Wednesday & Friday 3:00-4:00pm Online via Canvas messaging & Zoom meetings upon arrangement. Monday 12:00-1:00 pm, Tuesday & Thursday 3:00-4:00pm LFS 13.

COURSE DESCRIPTION
Title: Biology 10L – Introduction to Life Science Lab
Corequisite: Biology 10 or 10H. ADVISORIES: English 1A or 1AH
Summary: This lab course is recommended for the non-biological science and pre-education majors. This is an introductory laboratory course using biological concepts. The organismal structure, function, inheritance, evolution, and ecology are covered in this course. Field trips may be required. This course is not open to students with credit for Biology 3.
Biology 10L is a 1 unit lecture class.

COURSE CONTENT

Student Learning Outcomes

Upon completion of this course, students will be able to:

SLO1: Apply the principles of Mendelian genetics to evolutionary theory and human medicine.

SLO2: Understand the chemical basis of life.

SLO3: Assess human impacts on natural systems and critically evaluate solutions to environmental problems.

SLO4: Classify the wide range of living organisms and identify the evolutionary mechanisms that have impacted this diversity.

SLO5: Evaluate current scientific literature and examine how the scientific method is employed in biological research.

SLO6: Examine the function of DNA and recognize how its discovery has impacted modern science.

SLO7: Understand the cellular basis of life.

SLO8: Identify levels of biological organization and apply these concepts to living systems: By examining anatomical and physiological features and By investigating chemical and energy relationships.

REQUIRED MATERIALS:
Connect Access Card for Virtual Labs, McGraw-Hill ISBN: 9781265085605
Reliable internet connection and computer with Microsoft Office.
Ability to download and modify pdf and word documents.
COURSE POLICIES
Communication Policy
Zoom meetings can be scheduled on an individual basis; Emails/Canvas messages will be responded to within 24 hours Monday-Friday.
Attendance and Drop Policy
You will be considered absent if you fail to participate in the weekly online discussions/postings, assignments, and quizzes. After one week of no communication, you may be dropped from the course. Simply Logging in to the Course Is Not Considered Attendance
If you fail to participate in the first introductory online discussion by midnight the first week of class Wednesday, you will be dropped from the class. Students who do not purchase and use a Connect access code by the end of the third week will be dropped from the class.
Late work Policy
Late labs are not accepted unless you have a medical excuse.

TESTS AND EVALUATIONS:

Total Percentage of Points

Letter Grade

89.5%-100%

A

79.5%-89.4%

B

69.5%-79.4%

C

59.5%-69.4%

D

59.4% and below

F

Assignment

Points Possible (approximate)

Lab Assignments

240

Quizzes

170

Discussion

15

Final Assessment

20

Total Points

445

Other information:

Drops: You have until half way through the semester to drop. If you elect to do so, be sure to drop yourself. Do not assume you have been automatically dropped. This is very important, as after the half way point a grade must be given, by state law, whether you attend class or not.
Extra Credit: Extra credit is recommended if you feel that you are a borderline grade and that you need 25 points to get you over the hump. Extra credit should be viewed like an insurance policy. You're never quite sure when it may be needed. All extra credit is due the last week of the semester.

Help:

If you should have difficulty grasping the material presented during the course be sure to talk to your instructor at the first sign of trouble. Often, a few minutes can clear up many problems! If you are having trouble studying, perhaps you need a few study hints or a tutor at the Tutorial Center. Please go in for help!

Always keep in mind that this is a three-unit course. As a general rule, each hour of lecture requires two hours of additional study outside of the classroom each week. Do your planning accordingly. Success comes before work only in the dictionary. Overall, I hope you have a fun semester and learn Biology along the way. Good Luck.

Academic Dishonesty

Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entire honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences. See college catalog for details.

Accommodations

If you have a verified need for an academic accommodation or material in alternate media (i.e. Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

Diversity Statement:

Respect for Diversity: It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age,

socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups.

Lab Assignment

Module 1

Introduction

Scientific Method

Module 2

Build an Atom

Tests for Organic Molecules

Module 3

Cell Exploration

Cell Structure, Diffusion & Osmosis

Module 4

Cellular Respiration & Fermentation

Mitosis

Module 5

Photosynthesis

Module 6

DNA & Protein Synthesis

Meiosis

Module 7

Genetics

Module 8

Darwin & Natural Selection

Module 9

Microevolution & Speciation

Taxonomy

Module 10

Viruses

Prokaryotes

Module 11

Protists

Module 12

Fungi

Plants

Module 13

Animals

Module 14

Population Ecology

Module 15

Ecosystems

Module 16

Biomes

Module 17

Conservation Biology

Module 18

Final Exam