



Anatomy & Physiology Lab II (BIOL 2102) Online

Credit: 1 semester credit hour (Web Based Lab)

Prerequisite/ Co-requisite: Passed the Reading/Writing Sections of COMPASS or any other accepted test. BIOL 2302 must be taken at the same time.

Complete the Online Orientation and answer yes to 7+ questions on the Online Learner Self-Assessment: <http://www.lit.edu/depts/DistanceEd/OnlineOrientation/OOStep2.aspx>

Course Description

This class is web based and fully online. The lab provides a hands-on learning experience for exploration of human system components and basic physiology. Systems to be studied include integumentary, skeletal, muscular, nervous, and special senses. *This course is time-bound, structured, and completed totally online.*

Required Textbook and Materials

1. *Human Anatomy and Physiology Laboratory Exercises Level 2: Using Crime Scene Investigative Approaches*, Stephanie. A. Lanoue, 1st edition. Kendall-Hunt Publishing, 2010. **ISBN-13:** 978-07575-7810-6. *NOTE: This book is mandatory to pass the lab class; you will complete your labs (write) in it, scan it and submit through Blackboard for a grade.
2. See link in Blackboard for “Materials needed for Lab 2102”

Course Objectives/Learning outcomes

Upon completion of this course, the student will be able to:

1. Apply appropriate safety and ethical standards.
2. Locate and identify anatomical structures.
3. Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations.
4. Work collaboratively to perform experiments.
5. Demonstrate the steps involved in the scientific method.
6. Communicate results of scientific investigations, analyze data and formulate conclusions.

7. Use critical thinking and scientific problem-solving skills, including, but not limited to, inferring, integrating, synthesizing, and summarizing, to make decisions, recommendations and predictions.

Core objectives

1. Critical Thinking Skills: To include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
2. Communication Skills: To include effective development, interpretation and expression of ideas through written, oral, and visual communication.
3. Empirical & Quantitative Skills: To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusion.
4. Teamwork: To include the ability to connect choices, actions, and consequences to ethical decision-making
5. Personal Responsibility: To include ability to connect choices, actions and consequences to ethical decision-making.

Course Outline

- A. Chap 1 Endocrine
 1. Structures
 2. Functions
 3. Diagnose different diseases
- B. Chap 2 Blood
 1. Types of blood cells
 2. Solve a crime based on a blood type
- C. Chap 3 The Cardiovascular System: The Heart
 1. Structures
 2. Functions
 3. Blood Flow
 4. Electrical Conduction
 5. Deduce what is wrong with a patient's heart by the ECG strip
- D. Chap 4 The Cardiovascular System: Blood Vessels
 1. Name the major arteries on a model
 2. Name the major veins on a model
 3. Demonstrate how to take blood pressure with a sphygmomanometer
- E. Chap 5 The Lymphatic System
 1. Structures
 2. Functions
 3. Diseases
- F. Chap 6 The Respiratory System
 1. Structures
 2. Functions
 3. Use a spirometer to measure your lung capacity
- F. Chap 7 The Digestive System
 1. Structures
 2. Functions
 3. Analyze a victim's last meal by running forensic tests
- G. Chap 8 Nutrition, Metabolism, and Body Temperature Regulation

1. Current nutritional trends
 2. Problems
 3. Reading labels
- H. Chap 9 The Urinary System
1. Structures
 2. Functions
 3. Diagnose what is wrong with various patient's by their urine samples
- I. Chap 10 Fluid, Electrolyte, and Acid-Base Balance
1. Fluid balance
 2. Role of the brain
 3. Are all sports drinks the same
- J. Chap 11 The Reproductive System
1. Structures
 2. Functions

Grading Scale

- A 90 – 100
B 80 – 89
C 70 – 79
D 60 – 69
F 59 or less

Course Evaluation

Final grades will be calculated according to the following criteria:

1. Your semester Grade is based upon;

2 major exams (A midterm worth 30% covering Chapters 1-5 and a Final Exam, covering chapters 6-11, worth 30%). total = **60% = 600 points**

3 quizzes will be given. 100 points each. Then averaged. Total = **10% = 100 points**

Lab Grade - Weekly Assignment = each assignment, (10 in total), will be graded on a 30 point scale for a total = **30% = 300 points**

COMMON ASSIGNMENT/LAB 9 WHAT IS WRONG WITH THIS URINE?

Possible 100% = 1000 points

Course Policies

1. You must log into Blackboard and access this course a minimum of **3 times per week**.
2. Cheating of any type will not be tolerated. This includes copying and pasting.
3. **Late assignments will not be accepted.** Students will receive a zero for assignments not completed.

4. If you wish to drop this course, you must drop it administratively. If you stop logging-in to the course and do not complete the course drop process, then you will receive an “F” grade for the course
5. Internet Usage – Students are expected to use proper net etiquette while participating in course emails, assignment submissions, and online discussions.
6. <http://www.albion.com/netiquette/corerules.html>

Technical Requirements (for courses using Blackboard)

The latest technical requirements, including hardware, compatible browsers, operating systems, software, Java, etc. can be found online at:

[https://help.blackboard.com/en-](https://help.blackboard.com/en-us/Learn/9.1)

[us/Learn/9.1](https://help.blackboard.com/en-us/Learn/9.1) [2014 04/Student/015 Browser Support/015 Browser Support Policy](#) A

functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of the online technology and resources.

Disabilities Statement

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the online resource:

<http://www.lit.edu/depts/stuserv/special/defaults.aspx>

Student Code of Conduct Statement

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu or obtained in print upon request at the Student Services Office.