BIOL 2102
Anatomy & Physiology II Lab
Fall 2024

LAMAR INSTITUTE OF TECHNOLOGY

INSTRUCTOR CONTACT INFORMATION

Instructor: Harry L. Morgan
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Office Location: MPC 237
Office Hours: See Starfish for Available Office Hours

CREDIT

1 Semester Credit Hour

MODE OF INSTRUCTION

Face-to-Face and Web-Enhanced

PREREQUISITE/CO-REQUISITE:

Passed the Reading/Writing Sections of TSI or any other accepted test. Co-requisite BIOL 2301.

COURSE DESCRIPTION

The lab provides a virtual learning experience for the exploration of human system components and basic physiology. Systems to be studied include integumentary, skeletal, muscular, nervous, and special senses.

COURSE OBJECTIVES

Upon successful completion of this course, students 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 conclusions
4. **Teamwork:** To include the ability to connect choices, actions, and consequences to ethical decision-making

REQUIRED TEXTBOOK AND MATERIALS

▶ Both of these books are free resources: you may purchase a hard copy if you wish.

1. Lecture Book **-** OpexStax Anatomy & Physiology for BIOL 2301 & BIOL 2302 OpenStax Anatomy & Physiology textbook
2. (Lab Manual) for BIOL 2101 & BIOL 2102: **BIOL 2102 Fall 2024** **BIOL 2102 Fall 2024**
3. Regular (non-mechanical) #2 pencils.
4. Calendar for recording assignment due dates, tests, projects, etc.
5. Small 0.5' - 1" spine notebook with pocket (three ring for binding lab quizzes, laboratory exercises and extra notes)
6. Pens, colored pencils and/or highlighters of various colors

ATTENDANCE POLICY

- **If you miss a lab or basic quiz, you have 1 week to make it up.** After that, a zero will be assigned. So, get with your instructor right away – DO NOT WAIT!!!

1. **You Must Be Present to Take the practicums. (this is non-negotiable because they are 'live', hands-on tests).** Roll will be taken daily.
2. You are expected to be present at class times. *(NOTE: Absences place you at an academic disadvantage because it is difficult to learn from just class notes).* Absences should be reserved for severe illness, hospitalization, and funerals.
3. Cheating of any type will not be tolerated.
4. Late assignments will be accepted with a deduction as a late penalty. Students will receive a zero for assignments not completed.
5. If you wish to drop this course, you must drop it administratively. If you do not drop, you will receive an F for the course.
6. Internet usage- students are to use proper netiquette when participating in course email, assignment submissions and online discussions.

Please be prompt! You are expected to be in your seat, on time, when roll is taken. Do not make coming in late a habit or noticeable pattern. If you do find yourself in the position of arriving late due to unavoidable circumstances, enter the classroom with the **least** amount of disruption possible.

NOTE: If you are absent on a test day be prepared to present documentation for the absence to be able to make up the test.

DROP POLICY
If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified drop date as listed on the Academic Calendar. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

STUDENT EXPECTED TIME REQUIREMENT
For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week outside of class in a 16- week session OR approximately twelve to eighteen hours in an 8-week session. Online/Hybrid students should expect to spend at least as much time in this course as in the traditional, face-to-face class.

COURSE EVALUATION
Final grades will be calculated according to the following criteria:

1. Assignments (Lab Activities)	= 25%
2. Quizzes MGH	= 25%
3. Group Lab Project	= 20%
5. Midterm & Final Exam	= 30%

Total = 100%

GRADING SCALE

90-100	= A
80-89	= B
70-79	= C
60-69	= D
0 – 59	= F

ACADEMIC DISHONESTY
Students found to be committing academic dishonesty (cheating, plagiarism, or collusion) may receive disciplinary action. Students need to familiarize themselves with the institution's Academic Dishonesty Policy available in the Student Catalog & Handbook at http://catalog.lit.edu/content.php?catoid=3&navoid=80#academic-dishonesty.

AI STATEMENT
Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignment appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own, original work, unless otherwise specified. Students should contact their instructor with any questions as to acceptable use of AI / ChatGPT in their courses.

TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at https://lit.edu/online-learning/online-learning-minimum-computer-requirements. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

DISABILITIES STATEMENT

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu. You may also visit the online resource at Special Populations - Lamar Institute of Technology (lit.edu).

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. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

STARFISH

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

COURSE REQUIREMENTS

1. A Midterm and Final is required with two attempts given per assessment.
   The final score will be an ***average of attempts***.
2. Students will complete virtual labs for each chapter.
3. Students will complete a group lab project.
4. Late assignments will be accepted with a deduction as a late penalty. Students will receive a zero for assignments not completed.

Weekly Checklist BIOL 2102 – Fall 2024 – Online [Subject to Change]

WEEK	Assignments by the week	Due Date
Week 1 **Aug 26th – 30th**	▪ Introduction ▪Syllabus Review ▪ Naming Endocrine Organs ▪ Hormonal Actions, negative and positive feedback mechanisms ▪ Complete McGraw Hill Orientation/Introductory Materials ▪ **Work with group members on Group Project Pathogen Presentation *due 11.12.24***	▪ **09.01.24**
Week 2 **Holiday Sept 2nd** **Aug 3rd – 6th**	▪ Endocrine Organs, Tissues, Cells and hormones, ▪ **Quiz-Naming Endocrine Organs** ▪ **Work with group members on Group Project Pathogen Presentation *due 11.12.24***	▪ **09.08.24**
Week 3 **Sept 9th – 13th**	▪ Blood, Blood Functions, Blood Cells, Blood Typing ▪ **Quiz-Blood Cells** ▪ **Work with group members on Group Project Pathogen Presentation *due 11.12.24***	▪ **09.15.24**
Week 4 **Sept 16th – 20th**	▪ Cardiovascular system, Heart Structures, Cardiac Conduction System, EKGs, coronary Circulation, ▪ **Quizzes – Heart Structures and Coronary Circulation** ▪ **Work with group members on Group Project Pathogen Presentation *due 11.12.24***	▪ **09.22.24**
Week 5 **Sep 23rd – 27th**	▪ **Practicum I – Endocrine system: organs and hormones, cells and tissues, blood and blood cells, blood typing, heart structures and functions, EKGs, coronary circulation** ▪ **Work with group members on Group Project Pathogen Presentation *due 11.12.24***	▪ **09.29.24**
Week 6 **Sept 30 – Oct 4th**	▪ Blood Vessel Structure, Blood Pressure, Naming Blood Vessels ▪ **Quiz – Blood vessels of the face, head and neck**▪ **Work with group members on Group Project Pathogen Presentation *due 11.12.24***	▪ **10.06.24**
Week 7 **Oct 7th – 11th**	▪ Naming Blood Vessels and Blood Pressure ▪**Quiz – Types of Capillaries** ▪ **Work with group members on Group Project Pathogen Presentation *due 11.12.24***	▪ **10.13.24**

Week 8 **Oct 14th – 18th**	▪ Lymphatic System: lymphatic organs, tissues and vessels ▪ The Immune System: Innate and Adaptive Immune Systems, Immune System Cells ▪ **Quiz – Naming Virus-Caused Diseases.** ▪ **Work with group members on Group Project Pathogen Presentation *due 11.12.24***	▪ **10.16.24**
Week 9 **Oct 21st – 25th**	▪ **Practicum II – Blood vessel structure, naming blood vessels, blood pressure, lymphatic system organs and tissues, and immunity** ▪ **Work with group members on Group Project Pathogen Presentation *due 11.12.24***	▪ **10.27.24**
Week 10 **Oct 28th – Nove 1st**	▪ Respiration, lung structure, gas exchanges, and mechanisms of breathing and nervous control of respiration ▪ **Quiz – General respiration – exchange of gases** ▪ **Work with group members on Group Project Pathogen Presentation *due 11.12.24***	▪ **11.03.24**
Week 11 **Nov 4th – 8th**	▪ The digestive system, organs, tissues, cells and secretions ▪ Accessory organs: liver and pancreas - cells and functions ▪ **Quiz – Major digestive system organs and their functions, Metabolism and nutrition** ▪ **DUE SOON -> Group Project Pathogen Presentation *due 11.12.24***	▪ **11.10.24**
Week 12 **Nov 11th – 15th**	▪ **Practicum III – Respiration and Digestion** ▪ **Group Project Pathogen Presentation *due 11.12.24***	▪ **11.17.24**
Week 13 **Nov 18th – 22nd**	▪ **Quiz – Important minerals, vitamins and enzymes Urinary System, organs and structures; Urinalysis**	▪ **11.24.24**
Week 14 **Thanksgiving Break** **Nov 25th – 26th**	▪ **Complete missing work** ▪ **Prepare for Final Exams** ▪ **Sleep, rest, relax** ▪ **Enjoy time with family and friends** ▪ **Netflix, etc.** ▪ **Exercise** ▪ **Read a good book** ▪ **Do something nice for someone**	
Week 15 **Dec 2nd – 6th**	▪ The human reproductive system- male and female reproductive tracts ▪ **Quiz – Functions of Reproductive System Structures.**	▪ **12.06.24**

Review for Final Practicum	**Embryonic and fetal development** ▪ **Review for Final Practicum IV – Urinary and Reproductive Systems**	
Week 16 **Dec 9th – 11th** **Final/ Practicum IV**	▪ **No Labs** ▪ **Final/Practicum IV 12.09.24** **Urinary and Reproductive Systems (Chapters 23 – 28)** **You made it!!! Congratulations** 😊	▪**12.09.24**