

BIOL 2101
Anatomy & Physiology I Lab
Fall 2024



INSTRUCTOR CONTACT INFORMATION

Instructor: Harry L. Morgan
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Office Phone: 409-247-5341
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 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** - OpenStax Anatomy & Physiology for BIOL 2301 & BIOL 2302
[OpenStax Anatomy & Physiology textbook](#)
2. **(Lab Manual) for BIOL 2101 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.

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 2101 – Fall 2024

[Subject to Change]

Week:	To Do	Due Date
<p style="text-align: center;"><u>Week 1</u></p> <p style="text-align: center;">Aug 26th - 30th</p>	<ul style="list-style-type: none"> • Introduction • Register for McGraw Hill Virtual Labs (Information on Blackboard under "Modules" then • Syllabus • Anatomical Regions and Areas • Directional Terms Body Planes, Abdominal Regions • Join a group for Group Lab: Musculoskeletal Disorders • Complete Introductory materials McGraw Hill Connect Lab • Work with group members on Group Lab (Musculoskeletal Disorders) due 11.10 24 	<p>• 08.30.24</p> <p>• 09.01.24</p>
<p style="text-align: center;"><u>Week 2</u></p> <p style="text-align: center;">Labor Day Holiday 09.02.24</p> <p style="text-align: center;">Sept 3rd - 6th</p>	<ul style="list-style-type: none"> • Quiz - Anatomical Regions and Areas • Microscope Review and Practice Properties of Water, Essential Elements and Organic Compounds • Work with group members on Group Lab (Musculoskeletal Disorders) due 11.10 24 	<p>• 09.08.24</p>
<p style="text-align: center;"><u>Week 3</u></p> <p style="text-align: center;">Sept 9th - 13th</p>	<ul style="list-style-type: none"> • Quiz - Essential Elements • DNA Extraction Lab • Cell Structures, Function of Cell Structures • Cell Division - Mitosis • Quiz - Parts of the Microscope Quiz Functions of Cell Structures • Work with group members on Group Lab (Musculoskeletal Disorders) due 11.10 24 	<p>• 09.15.24</p>
<p style="text-align: center;"><u>Week 4</u></p> <p style="text-align: center;">Sept 16th - 20th</p>	<ul style="list-style-type: none"> • Practicum I • Anatomical Regions and areas • Directional Terms • Parts of the Microscope • Cell Division, Cell Structures and Functions • DNA Structure • Essential Elements 	<p>• 09.22.24</p>

	<ul style="list-style-type: none"> • Organic Compounds • Types of tissues and examples of each • Skin Structures. • Work with group members on Group Lab (Musculoskeletal Disorders) due 11.10 24 	
<p><u>Week 5</u> Sept 23rd - 27th</p>	<ul style="list-style-type: none"> • Tissue Examples, and Functions of the Types of Tissues - Quiz • Tissues cont'd • Integumentary System • Functions of the Skin • Work with group members on Group Lab (Musculoskeletal Disorders) due 11.10 24 	• 09.29.24
<p><u>Week 6</u> Sept 30th - Oct 4th</p>	<ul style="list-style-type: none"> • Types of Bones • Bone Tissue • Axial Skeleton • The Skull • Work with group members on Group Lab (Musculoskeletal Disorders) due 11.10 24 	• 10.06.24
<p><u>Week 7</u> Oct 7th - 11th</p>	<ul style="list-style-type: none"> • Practicum II - The Integumentary System and Tissues • Work with group members on Group Lab (Musculoskeletal Disorders) due 11.10 24 	• 10.13.24
<p><u>Week 8</u> Oct 14th - 18th</p>	<ul style="list-style-type: none"> • Quiz - Bones and Structures of the Skull, Identification of Bone Markings, Types of Joints, and examples of each type 	• 10.17.24
<p><u>Week 9</u> Oct 21st - 25th</p>	<ul style="list-style-type: none"> • Quiz - Types of Joints Bones and Joints Appendicular Skeleton Bones of the Hand and Foot Overview of Bone Forensics • Work with group members on Group Lab (Musculoskeletal Disorders) due 11.10 24 	• 10.27.24
<p><u>Week 10</u> Oct 28th - Nov 1st</p>	<ul style="list-style-type: none"> • Bone Forensics Lab • Work with group members on Group Lab (Musculoskeletal Disorders) due 11.10 24 	• 11.03.24

<p align="center"><u>Week 11</u></p> <p align="center">Nov 4th - 8th</p>	<ul style="list-style-type: none"> • Practicum III - The Skeletal System • Work with group members on Group Lab (Musculoskeletal Disorders) due 11.10.24 	<p align="center">• 11.10.24</p>
<p align="center"><u>Week 12</u></p> <p align="center">Nov 11th - 15th</p>	<ul style="list-style-type: none"> • Muscles of the Human Body • Muscle Shapes • Study of Muscles, Muscle Form and Structure, and Muscle Types 	<p align="center">• 11.17.24</p>
<p align="center"><u>Week 13</u></p> <p align="center">Nov 18th - 22nd</p>	<ul style="list-style-type: none"> • Central Nervous System • Brain Structures and Functions 	<p align="center">• 11.24.24</p>
<p align="center"><u>Week 14</u></p> <p align="center">Nov 25th - 26th</p> <p align="center">Thanksgiving Holiday</p> <p align="center">Nov 28th - 29th</p>	<ul style="list-style-type: none"> • Special Senses - The Eye and the Ear Structures and Function 	<p align="center">• 11.26.24</p>
<p align="center"><u>Week 15</u></p> <p align="center">Review</p> <p align="center">Dec 2nd - 6th</p>	<ul style="list-style-type: none"> • Final Practicum - Practicum IV 1. Muscle Identification 2. Brain Structures & Functions 3. The Eye & Ear Structures and Functions 	
<p align="center"><u>Week 16</u></p> <p align="center">Dec 7th - 11th</p>	<p>Finals Week - No Labs</p> <p>Final Practicum [Exam] - Dec 9th (Chapters 1 - 16)</p> <ul style="list-style-type: none"> • Congratulations! You made it!! Celebrate!!! 	<p align="center">• 12.09.24</p>