

BIOL 2102 2A1, 2B1, 2C1, 2D1
Anatomy & Physiology II Lab
Spring 2026



**LAMAR INSTITUTE
OF TECHNOLOGY**

CREDIT

1 Semester Credit Hour (Web-Based)

MODE OF INSTRUCTION

Online

PREREQUISITE/CO-REQUISITE:

Pre-requisite Biol 2101 and 2301

Passed the Reading/Writing Sections of TSI or any other accepted test

Co-requisite Biol 2302

COURSE DESCRIPTION

The lab provides a virtual learning experience for exploration of human system components and basic physiology. Systems to be studied include endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including nutrition), urinary (including fluid and electrolyte balance), and reproductive (including human development and genetics).

COURSE OBJECTIVES

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

- Use anatomical terminology to identify and describe the locations of major organs of each system covered.
- Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.
- Describe the interdependency and interactions of the systems.
- Explain the contributions of organs and systems to the maintenance of homeostasis.
- Identify causes and effects of homeostatic imbalances.
- Describe modern technology and tools used to study anatomy and physiology.

CORE OBJECTIVES

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

INSTRUCTOR CONTACT INFORMATION

Instructor: Dr. Connie J. Grass
Email: cjgrass@lit.edu
Office Phone: (409) 247-4863
Office Location: MPC - 217
Office Hours: 9:00 AM – 11:00 AM Mon - Friday
See Starfish for Available Office Hours
[Click Here for Starfish](#)

REQUIRED TEXTBOOK AND MATERIALS:

REQUIRED = Textbook - OpenStax Anatomy & Physiology Levels I and II
Anatomy and Physiology from OpenStax, Print ISBN 1938168135, Digital ISBN 1947172042,
[Click Here for the OpenStax Anatomy & Physiology textbook](#)

Your textbook for this class is available for free online, and a print copy can be purchased online, or obtained through Eagle Learning Essentials. [Click Here for Eagle Learning Essentials](#)

Supplemental = Textbook - WikiBooks – Human Physiology
https://en.wikibooks.org/wiki/Human_Physiology

ATTENDANCE POLICY

1. You must log into Blackboard and access this course a minimum of 3 times per week.
2. Late assignments will be accepted, except for the final exam, with a deduction as a late penalty. Students will receive a zero for assignments not completed.
3. 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.

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](#) located on the college's [Student Success](#) web page. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

COURSE CALENDAR BIOL 2102 (LAB) - SPRING 2026

Week	ASSIGNMENTS	Due Dates
Week 1 Jan 20 th – 23 rd Module 4: ~Introduction ~Endocrine System	<ul style="list-style-type: none"> <input type="checkbox"/> Discussion Board: Introduction <input type="checkbox"/> Syllabus Quiz <input type="checkbox"/> Complete McGraw-Hill Orientation/Introductory Materials <input type="checkbox"/> Join a group for Group Project – Pathogen Presentation due 04.22.26 	<input type="checkbox"/> 01.25.26
Week 2 Jan 26 th – 30 th Module 4: ~Endocrine System	<ul style="list-style-type: none"> <input type="checkbox"/> McGraw-Hill Labs: Endocrine System <ul style="list-style-type: none"> 1. Endocrine System Overview 2. Effects of Blood Glucose Level <input type="checkbox"/> Start working with group members on Group Project – Pathogen Presentation due 04.22.26 	<input type="checkbox"/> 01.31.26
Week 3 Feb 2 nd – 6 th Module 4 ~Endocrine System	<ul style="list-style-type: none"> <input type="checkbox"/> McGraw-Hill Labs: Endocrine System <ul style="list-style-type: none"> 3. Thyroid Hormone & Temperature Regulation 4. Endocrine System Lab Quiz <input type="checkbox"/> Work with group members on Group Project-Pathogen Presentation due 04.22.26 	<input type="checkbox"/> 02.08.26
Week 4 Feb 9 th – 13 th Module 4: ~Cardiovascular (Blood & Heart)	<ul style="list-style-type: none"> <input type="checkbox"/> McGraw-Hill Labs: Cardiovascular <ul style="list-style-type: none"> 1. Blood Typing 2. Blood Pressure Overview 3. Blood Pressure Physiology 4. Cardiac Cycle Overview <input type="checkbox"/> Work with group members on Group Project –Pathogen Presentation due 04.22.26 	<input type="checkbox"/> 02.15.26
Week 5 Feb 16 th – 20 th Module 4: ~Cardiovascular (Heart & Blood Vessels)	<ul style="list-style-type: none"> <input type="checkbox"/> McGraw-Hill Labs: Cardiovascular <ul style="list-style-type: none"> 5. Cardiovascular – Heart Auscultation 6. Cardiovascular – Pulse Rate 7. Cardiovascular Quiz <input type="checkbox"/> Work with group members on Group Project Pathogen Presentation due 04.22.26 	<input type="checkbox"/> 02.22.26
Week 6 Feb 23 th – 27 th Module 5: ~Immune System	<ul style="list-style-type: none"> <input type="checkbox"/> McGraw-Hill Labs: Immune/Lymphatic <ul style="list-style-type: none"> 1. Innate Immunity Overview 2. Adaptive Immunity Overview 3. Differential Blood Cell Count 4. Immune System Quiz <input type="checkbox"/> Work with group members on Group Project Pathogen Presentation due 04.22.26 	<input type="checkbox"/> 03.01.26

<p>Week 7 Mar 2nd – 6th Module 5: ~Respiratory System</p>	<ul style="list-style-type: none"> <input type="checkbox"/> McGraw-Hill Labs: Respiratory <ol style="list-style-type: none"> 1. Respiratory System Overview 2. Mechanism of Breathing 3. Pulmonary Function Tests 4. Respiratory System Lab Quiz <input type="checkbox"/> Work with group members on Group Project Pathogen Presentation due 04.22.26 	<input type="checkbox"/> 03.08.26
<p>Week 8 Mar 9th – 13th Spring Break</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Sleep, rest, relax <input type="checkbox"/> Enjoy time with family and friends <input type="checkbox"/> Netflix, etc. <input type="checkbox"/> Exercise <input type="checkbox"/> Read a good book <input type="checkbox"/> Do something nice for someone 	
<p>Week 9 Mar 16th – 20th ~Midterm Exam</p>	<ul style="list-style-type: none"> <input type="checkbox"/> MIDTERM EXAM Opens 03.17.26 and Closes 03.18.26 (Chapters 17 – 22) <input type="checkbox"/> Work with group members on Group Project Pathogen Presentation due 04.22.26 	<input type="checkbox"/> 03.18.26
<p>Week 10 Mar 23rd – 27th Module 5: ~Digestive System</p>	<ul style="list-style-type: none"> <input type="checkbox"/> McGraw-Hill Labs: Digestive and Metabolism <ol style="list-style-type: none"> 1. Enzymes & Digestion 2. Assignment: Digestive System <input type="checkbox"/> Work with group members on Group Project Pathogen Presentation due 04.22.26 	<input type="checkbox"/> 03.29.26
<p>Week 11 Mar 30th – April 3rd Module 5: ~Digestive System ~Metabolism</p>	<ul style="list-style-type: none"> <input type="checkbox"/> McGraw-Hill Labs: Digestive and Metabolism <ol style="list-style-type: none"> 3. Digestion Lab Quiz <input type="checkbox"/> Work with group members on Group Project – Pathogen Presentation due 04.22.26 	<input type="checkbox"/> 04.04.26
<p>Week 12 April 6th – 10th Module 5: ~Urinary System</p>	<ul style="list-style-type: none"> <input type="checkbox"/> McGraw-Hill Labs: Urinary System <ol style="list-style-type: none"> 1. Glomerular Filtration 2. Tubular Reabsorption and Secretion <input type="checkbox"/> Work with group members on Group Project – Pathogen Presentation due 04.22.26 	<input type="checkbox"/> 04.12.26
<p>Week 13 April 13th -17th Module 5: ~Urinary System</p>	<ul style="list-style-type: none"> <input type="checkbox"/> McGraw-Hill Labs: Urinary System <ol style="list-style-type: none"> 1. Urinalysis 2. Urinary System Quiz <input type="checkbox"/> DUE SOON → Work with group members on Group Project – Pathogen Presentation due 04.22.26 	<input type="checkbox"/> 04.19.26

<p>Week 14</p> <p>April 20th – 24th</p> <p>Module 5: Reproductive System (Development & Inheritance)</p>	<ul style="list-style-type: none"> ☒ McGraw-Hill Labs Reproductive <ul style="list-style-type: none"> 1. Development & Inheritance 2. Reproductive System ☒ DUE: Group Project – Pathogen Project 	☒ 04.26.26
<p>Week 15</p> <p>April 27th – May 1st</p> <p>Module 5: ~Reproductive System (Development & Inheritance)</p>	<ul style="list-style-type: none"> ☒ McGraw-Hill Labs: Reproductive <ul style="list-style-type: none"> 3. Reproductive System Quiz 	☒ 05.01.26
<p>Week 16</p> <p>May 4th – 8th</p> <p>Final Exam Review</p>	<ul style="list-style-type: none"> ☒ McGraw-Hill Labs: Review of Systems <ul style="list-style-type: none"> 1. Fetal Pig Dissection Part 1 2. Fetal Pig Dissection Part 2 	☒ 05.08.26
<p>Week 17</p> <p>May 11th – 13th</p> <p>Final Exam</p>	<p style="text-align: center;"><i>Final Exam Opens 05.09.26 and Closes 05.11.26 (Chapters 23 – 28)</i></p> <p style="text-align: center;">You made it!! Celebrate </p>	☒ 05.11.26

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

- Mandatory Course Syllabus Quiz 5%
- MGH(Lab Activities) 25%
- Quizzes MGH 20%
- Midterm & Final Exam 30%
- Individual & Group Project 20%

Total = 100%

GRADING SCALE

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

TECHNICAL REQUIREMENTS

For the latest technical requirements, including hardware, compatible browsers, operating systems, etc., review the Minimum Computer and Equipment Requirements on the [LIT Online Experience](#) page. A functional broadband internet connection, such as DSL, cable, or WiFi, is necessary to maximize the use of online technology and resources.

Quizzes and Exams in this course are administered through Blackboard. Exams will be administered with Respondus **LockDown Browser + Respondus Monitor (webcam)**

Requirements to take exams include:

- A reliable computer, desktop or laptop (phones, chromebooks, tablets, and iPads are not allowed).
- Windows: 10, 8, 7
- Mac: OS X 10.10 or higher
- Adobe Flash Player (bundled with the LockDown Browser installation)
- Web camera (internal or external) & microphone
- A reliable internet service provider. A broadband internet connection.
- A room to take the exam where you are alone (other individuals in the room are not allowed)

Watch these overview videos to understand the tools you will be using to take the exam.

Respondus LockDown

Browser: <https://www.youtube.com/watch?v=XuX8WoeAycs#action=share>

Respondus Monitor: <https://www.youtube.com/watch?v=hv2L8Q2NpO4 - action=share>

Respondus LockDown Browser + Respondus Monitor (webcam)

Download Instructions:

- Select the quiz in the course
- Under Quiz Requirements you will see "To take this quiz you must use the Respondus LockDown Browser"
- Below this will appear: "You can use the button below if you have not already downloaded LockDown Browser". Click the button to go to the download page and then follow the instructions
- Use the link to download Respondus LockDown Browser to your computer; follow the installation instructions
- Return to the Quiz page in Brightspace (it may still be open in another tab) and select the quiz
- Select "Launch LockDown Browser"
- The quiz will now start

Note: LockDown Browser only needs to be installed once on a computer or device. It will start automatically from that point forward when a quiz requires it.

Guidelines while taking online quizzes or exams, follow these instructions:

- Ensure you're in a location where you won't be interrupted.

- Turn off all other devices (e.g. tablets, phones, second computers) and place them outside of your reach.
- Before starting the test, know how much time is available for it, and also that you've allotted sufficient time to complete it.
- Clear your desk or workspace of all external materials not permitted - books, papers, other devices.
- Remain at your computer for the duration of the test.
- If the computer, Wi-Fi, or location is different than what was used previously with the "Webcam Check" and "System & Network Check" in LockDown Browser, run the checks again prior to the exam.
- To produce a good webcam video, do the following:
 - Avoid wearing baseball caps, hats with brims, or hoodies.
 - Ensure your computer or device is on a firm surface (a desk or table). Do NOT have the computer on your lap, a bed, or other surface where the device (or you) are likely to move.
 - If using a built-in webcam, avoid readjusting the tilt of the screen after the webcam setup is complete.
 - Take the exam in a well-lit room, but avoid backlighting (such as sitting with your back to a window)
 - Remember that LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted.

The following violations during testing will result in a grade of zero or reduction in points:

- Using technology or electronic devices of any kind including, but not limited to, iPads, phones, smart glasses, earbuds, smartwatches.
- Leaving the testing environment or face missing from frame or obscured.
- Noises that might indicate external help.
- Any other questionable activities indicating cheating.

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 in the Eagles' Nest Room 129. It 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 get in touch with 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.

ARTIFICIAL INTELLIGENCE 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 assignments 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 the acceptable use of AI/ChatGPT in their courses.

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 log in 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.

ADDITIONAL COURSE POLICIES

COURSE REQUIREMENTS

- A Midterm and Final is required, with two attempts given per assessment, and uses Respondus Lockdown Browser. The final score will be an ***average of attempts***.
- Five quizzes will be given using Respondus Lockdown Browser, with two attempts given per assessment. The final score will be an ***average of attempts***.
- Students will complete video quizzes and discussion boards for each unit.
- Students will complete an individual project and a group project. A deduction in points will be given for completing group project without partners.
- Late assignments, **except for the final exam**, will be accepted with a deduction as a late penalty. Students will receive a zero for assignments not completed.

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>.

STUDENT EXPECTED TIME REQUIREMENTS

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.

