

BIOL 2404
Anatomy & Physiology (Specialized)
Spring 2024



LAMAR INSTITUTE
OF TECHNOLOGY

INSTRUCTOR CONTACT INFORMATION

Instructor: Melanie Daleo
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Office Hours: See Starfish for Available Office Hours-
[Click Here for Starfish](#)

CREDIT

4 Semester Credit Hours (4 hours lecture, 3 hours lab)

MODE OF INSTRUCTION

Hybrid – Tuesday and Thursday 1:00 – 2:45/Online

PREREQUISITE/CO-REQUISITE:

TSI Complete

COURSE DESCRIPTION

This course is a study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content will be integrated and specialized for the pre-hospital professional.

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

1. Use anatomical terminology to identify and describe locations of major organs of each system covered.
2. Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.
3. Describe the interdependency and interactions of the systems.
4. Explain contributions of organs and systems to the maintenance of homeostasis.
5. Identify causes and effects of homeostatic imbalances.
6. Identify major organ systems and their associations with health and disease.
7. Understand the pathophysiology, and disease process as it relates to pre-hospital emergency care.
8. Explain the effects of medications and understand the mechanisms of action at all levels of cellular organization.
9. Describe modern tools and technology used in anatomy and physiology.

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
5. **Personal Responsibility:** To include the ability to connect choices, actions, and consequences to ethical decision-making

REQUIRED TEXTBOOK AND MATERIALS

REQUIRED = Textbook - OpenStax Anatomy & Physiology Levels I and II – [OpenStax Anatomy & Physiology textbook](#)

Your textbook for this class is available for free online. If you prefer, you can also get a print version at a very low cost. Your book is available in web view and PDF for free. You can also choose to purchase on iBooks or get a print version via the campus bookstore or from OpenStax on Amazon.com.

You can use whichever formats you want. Web view is recommended -- the responsive design works seamlessly on any device. If you buy on Amazon, make sure you use the link on your book page on openstax.org so you get the official OpenStax print version.

Anatomy and Physiology from OpenStax, Print ISBN 1938168135, Digital ISBN 1947172042, www.openstax.org/details/anatomy-and-physiology

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

ATTENDANCE & CLASSROOM POLICIES

1. You must log into Blackboard and access this course a minimum of 3 times per week.
2. A Midterm and Final are required with two attempts given per assessment. The final score will be an **average of all attempts**.
3. Students will complete assignments for each chapter.
4. Students will complete a group lab project.
5. Late assignments will be accepted with a deduction as a late penalty. Students will receive a zero for assignments not completed.
6. Cheating of any type will not be tolerated.
7. 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](#). 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	= 25%
2. Quizzes	= 25%
3. Homework	= 20%
4. Midterm and 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>.

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 \(lit.edu\)](http://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.

2404 Anatomy & Physiology Course Schedule	
WEEK	TOPICS
Week 1 Jan 16 th – 19 th Module 1	A&P Overview <ul style="list-style-type: none"> ▪ Homeostasis ▪ Feedback Anatomical Terminology <ul style="list-style-type: none"> ▪ General Body Organization ▪ Regional & Directional Terms ▪ Body Cavities Cellular Organization
Week 2 Jan 22 nd – 26 th Module 2	Integumentary System <ul style="list-style-type: none"> ▪ Structures & Functions ▪ Diseases, Disorders, and Treatments
Week 3 Jan 29 th – Feb 2 nd Module 3	Skeletal System <ul style="list-style-type: none"> ▪ Bone Structure, Specific Bones & Functions ▪ Diseases, Disorders, Treatments
Week 4 Feb 5 th – 9 th Module 4	Musculoskeletal System <ul style="list-style-type: none"> ▪ Joint Classification ▪ Gross Anatomy ▪ Physiology of Muscle Contraction ▪ Diseases, Disorders, Treatments
Week 5 Feb 12 th – 16 th Module 5	Circulatory System <ul style="list-style-type: none"> ▪ Blood, Heart & Blood Vessels ▪ Diseases, Disorders, Treatments
Week 6 Feb 19 th – 23 rd Module 5 & 6	Circulatory System Respiratory System <ul style="list-style-type: none"> ▪ Respiratory Organs and Functions ▪ Mechanisms of Breathing
Week 7 Feb 26 th – Mar 1 st Module 6	Respiratory System <ul style="list-style-type: none"> ▪ Transport of respiratory gases ▪ Respiratory volumes and Control of respiration ▪ Diseases, Disorders, Treatments
Week 8 Mar 4 th – 8 th	Midterm Exam Covers Modules 1 - 6
Spring Break Mar 11 th – 15 th	<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
Week 9 Mar 18 th - 22 nd	Lymphatic & Immune System <ul style="list-style-type: none"> ▪ Components of lymphatic and immune system ▪ Immunity

Module 7	<ul style="list-style-type: none"> ▪ Diseases, Disorders, Treatments 	
Week 10 Mar 25th – 28th Good Friday Holiday March 29 th Module 8	Gastrointestinal <ul style="list-style-type: none"> ▪ Functions and Control of digestive processes ▪ Digestive organs and enzymes ▪ Diseases, Disorders, Treatments Nutrition & Metabolism <ul style="list-style-type: none"> ▪ Nutritional requirements ▪ Vitamins and Minerals 	
Week 11 April 1st – 5th Module 9	Urinary System & Osmoregulation <ul style="list-style-type: none"> ▪ Functions and Organs ▪ Urine formation and regulation ▪ Diseases, Disorders, Treatments 	
Week 12 April 8th – 12th Module 10	Nervous System <ul style="list-style-type: none"> ▪ Neurons and nervous impulse ▪ Brain and spinal cord ▪ Peripheral and autonomic nervous system ▪ Sympathetic and parasympathetic nervous system 	
Week 13 April 15th – 19th Module 10	Neuroendocrine <ul style="list-style-type: none"> ▪ Hormones and Endocrine Glands ▪ Diseases, Disorders, Treatments 	
Week 14 April 22nd – 26th Module 10	Sensory System <ul style="list-style-type: none"> ▪ Structures and functions ▪ Diseases, Disorders, Treatments 	
Week 15 April 29th – May 3rd Module 11	Reproductive System <ul style="list-style-type: none"> ▪ Male reproductive system ▪ Female reproductive system ▪ Pregnancy ▪ Sexually Transmitted Diseases, Disorders, Treatments 	
Week 16 May 6th – 8th	Final Exam covers Modules 7 - 11	

Each module will include the following methods of evaluation:

- Participation in individual and group activities
- Quizzes – module assessments, interactive quizzes
- Assignments