



BIOL 2401. 223H3

Anatomy and Physiology I

Spring 2025

Thursdays 6 PM-8:50 PM (lab only on campus)

**All chapter lecture recordings are available via Brightspace.
SI Sessions will be determined after the course begins.**

Instructor Information: Dr. Meagan Nkansah; mnkansah@com.edu

Student hours and location:

Monday/Wednesday virtual hours from 12 PM-5 PM via email or Teams, by appointment
Tuesday virtual or on-campus from 1 PM-6 PM by appointment via email
Thursday virtual or on-campus from 1 PM-6 PM by appointment via email

Required Textbook/Materials:

- Marieb, E.N. & Hoehn, K., 2019. Human Anatomy and Physiology, 11th ed. Boston, MA; Pearson Education, Inc. This is an **eBook via VitalSource in Brightspace and you will have access to the eBook from day one.**
- Amerman, E., 2017. Exploring Anatomy & Physiology in the Laboratory, 3rd edition. Englewood, Colorado, Morton Publishing Company (customized for COM, some pages will be missing) ISBN-13: 978-1-61731-955-6 (**Lab Manual**)
- **Web camera** (either built into your computer or attachable) to take exams, purchased from the college bookstore or a third-party vendor.

Course Description: Anatomy and Physiology II is the second part of a two-course sequence. It is a study of the structure and function of the human body, including the following systems: endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including nutrition), urinary (including fluid and electrolyte balance), and reproductive (including human development and genetics). Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. Prerequisites: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. BIOL 2401 with a grade of "C" or better.

Course requirements:

Online Exams & Comprehensive Final Exam:

There are 4 online or in-class exams and 1 comprehensive final exam (CFE) online or in-class. Each lecture exam consists of multiple-choice, fill-in-the-blank, matching, true-false, essay and/or identification questions. Exam dates are listed in the "What's due when?" document and in Brightspace.

Online Exam Quizzes via Brightspace:

There are 4 online lecture quizzes in Brightspace. Each quiz consists of multiple-choice questions. You will have 60 minutes to take the quiz. Lecture quizzes will be assigned the week before an exam. The "What's due when?" document lists lecture quiz due dates.

Online Chapter Quizzes via Brightspace:

There are 4 online lecture quizzes in Brightspace. Each quiz consists of multiple-choice questions. You will have 60 minutes to take the quiz. Lecture quizzes will be assigned the week before an exam. The "What's due when?" document lists lecture quiz due dates.

Online Lab Activity Quizzes (LAQ) via Brightspace:

There are 12 online lab activities. Each activity reinforces material found in the 2 scheduled lab practicals. -**You are responsible for watching all videos uploaded to the Lab Material area for a lab activity.** The “What’s due when?” document lists lab quiz due dates.

Lab Practicals:

There are 2 lab practicals **administered in the lab**. Practical dates are listed in the “What’s due when?” document.

Bonus Points:

Bonus points are **not** a part of the course requirements, but there will be opportunities to earn bonus points offered throughout the semester. All bonus points will be part of an exam or practical.

Determination of Course Grade/Detailed Grading Formula:

Course Assessment	Total Points	Percentage of Course
LECTURE PORTION	700	70.0%
Online Syllabus Quiz	5 points	0.5%
Online Respondus Quiz	5 points	0.5%
Online Chapter Quizzes (points vary by quiz)	200 points	20.0 %
Online Exam Quizzes (4)	100 (25 pts each)	10.0 %
Online Lecture Exams (4)	340 (85 pts each)	34.0 %
Online Comprehensive Final Exam	50 points	5.0%
LAB PORTION	300	30.0%
Online Lab Safety Quiz	10 points	1.0%
Online Lab Activity Quizzes (12)	120 (10 pts each)	12.0%
Lab Practicals (2)	170 (85 pts each)	17.0%
TOTAL POINTS	1000	100%

Grading Scale:

A = between 900 and 1000 points

B = between 800 and 899.9 points

C = between 700 and 799.9 points

D = between 600 and 699.9 points

F = below 599.9 points

FN = failure of the course due to non-attendance and non-completion of course assignments

I = may be assigned at the instructor’s discretion per the college’s incomplete policy.

W = withdrawal may be assigned per the college’s withdrawal policy.

Science Lab Policy:

This course consists of both a lecture and laboratory grade component. Students must earn 70% or better in the laboratory component to pass the course successfully. **Earning less than 70% in the laboratory component will result in an F for the course, regardless of the lecture grade.** Passing the laboratory component and failing the lecture component will not guarantee a passing grade for the course.

Deviations from this policy will be at the sole discretion of the instructor.

Late Work, Make-Up, and Extra-Credit Policy:

EXAMS: Exams are administered via Brightspace and are open for 7 days. Make-ups are allowed at the discretion of the instructor.

LAB PRACTICALS: Practical make-ups are allowed at the discretion of the instructor.

MISSED ASSIGNMENTS: Please contact the instructor if you missed an assignment to make arrangements to complete the missed assignment, if possible. All make-up of missed assignments is at the discretion of the instructor.

Attendance Policy:

Attendance of the face-to-face laboratory component of the course is **required**. Being absent for three or more required lab meetings will result in an "F" for the course grade unless the instructor approves a documented excuse.

Communicating with your instructor:

ALL electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means. In addition to your COM email, announcements will be posted in Brightspace about the course content, due date, and other updates. You are required to actively monitor these posts to maintain awareness of any course changes.

Student Learner Outcome (SLO)	Maps to Core Objective(s)	Assessed via this Assignment
1. Use anatomical terminology to identify and describe the locations of major organs of each system covered.		Exams 1-4
2. Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.		Exam 1 Essay Questions
3. Describe the interdependency and interactions of the systems.		Skeletal System Case Study
4. Explain the contributions of organs and systems to maintaining homeostasis.	CT	Skeletal System Case Study
5. Identify causes and effects of homeostatic imbalances.		Case Study Activity
6. Describe modern technology and tools used to study anatomy and physiology.		Muscle Fatigue lab
7. Apply appropriate safety and ethical standards.		Lab Safety Quiz
8. Locate and identify anatomical structures.		Lab Practical 1 & 2
9. Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations.		Lab Practical 1 & 2
10. Work collaboratively to perform experiments.	TW	Skeletal System Case Study
11. Demonstrate the steps involved in the scientific method.		Conductivity Lab
12. Communicate results of scientific investigations, analyze data and formulate conclusions.	CS	Skeletal System Case Study
13. Use critical thinking and scientific problem-solving skills, including, but not limited to, inferring, integrating, synthesizing, and summarizing, to make decisions, recommendations, and predictions.	EQS	Skeletal System Case Study

Academic Dishonesty:

Disciplinary actions will be taken for students who exhibit disorderly conduct, cheat on exams, submit plagiarized work, or are involved in collusion (helping others cheat or plagiarize) as defined in the Student Handbook under the heading, "Discipline and Penalties." The maximum penalty imposed for violations will be an F in the course. The student will also be referred to the Associate Vice President of Student Success and Conduct for further disciplinary action. Please read through the "Standards of Student Conduct" in the Student Handbook for a more complete discussion of these issues and your rights and responsibilities.

Student Concerns:

If you have any questions or concerns about any aspect of this course, please contact me using the provided contact information. If you continue to have questions after discussing your concern with me, please contact Prof. Abernathy at sabernathy@com.edu or 409-933-8330.

Course Schedule (SUBJECT TO CHANGE IF NEEDED)

WK	DAYS	FTF LABORATORY SCHEDULE	SET-UP TAKE-DOWN SCHEDULE
1	1/13 to 1/19	Lab Safety Exercises 1-3 and 1-4 (Directional Terms & Regional Terms) Exercises 1-5 and 1-6 (Body Cavities/membranes & Planes of section)	
2	1/20 to 1/26	Conductivity Lab DEMONSTRATION Exercise 2-1 : pH Lab (pH, Acids and Bases)	
3	1/27 to 2/2	Exercise 4-1 (Organelles and Cell Structures) Pearson Diffusion Lab Exercise 4-4 (Mitosis and the Cell Cycle) Exercises 5-1 through 5-4 (Epithelial, Connective, Muscle and Nervous Tissues)	
4	2/3 to 2/9	Exercise 6-1 (Skin Anatomy and Accessory Structures) Exercise 6-2 (Histology of Integument) Exercise 6-3 (Touch Receptor Distribution) Exercise 6-4 (Fingerprinting)	
5	2/10 to 2/16	Exercise 7-1 (Microscopic Anatomy of Bone) Exercise 7-3 (Bone Marking and Bone Shapes) Exercise 7-4 (Anatomy of Long Bones) Exercise 8-1 to 8-3 (Anatomy of the Skeleton)	
6	2/17 to 2/23	Lab practical	
7	2/24 to 3/2	Forensic Lab (Handout) Exercise 9-1 (Classification of Joints) Exercise 9-2 Synovial Joints Exercise 9-3 (Knee Joint)-use of lab equipment	
8	3/3 to 3/9	Exercise 10-1 (Skeletal Muscle Anatomy) Exercise 11-1 (Skeletal Muscle Anatomy and Microanatomy) Exercise 11-3 (Smooth and Cardiac Muscle Tissues)	
9	3/10 to 3/16	Vernier Muscle Fatigue Handout	
10	3/17 to 3/23	SPRING BREAK	
11	3/24 to 3/30	Exercise 12-1 (Neurons and Neuroglia) Exercise 12-2 Nervous Tissue Physiology Neural Synapse Lab	
12	3/31 to 4/6	Exercise 13-1 (Anatomy of the Brain) Exercise 13-2 (Anatomy of the Spinal Cord)	
13	4/7 to 4/13	Exercise 14-2 (Cranial Nerve Structure and Function) Exercise 14-3 (Spinal Nerves and Reflex) Exercise 14-4 (The Autonomic Nervous)	
14	4/14 to 4/20	Exercise 15-1 (Anatomy of Eye and Vision) Exercise 15-2 (Anatomy of an Ear, Hearing & Equilibrium) Exercise 15-4 (Physiology of the General Senses)	
15	4/21 to 5/8	Lab Practical Examinations Final exam	

Institutional Policies and Guidelines

Grade Appeal Process: Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook https://www.com.edu/student-services/docs/Student_Handbook_2024-2025_v2.pdf. *An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.*

Academic Success & Support Services: College of the Mainland is committed to providing students the necessary support and tools for success in their college careers. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

ADA Statement: Any student with a documented disability needing academic accommodations is requested to contact:

Kimberly Lachney, Student Accessibility Services Coordinator

Phone: 409-933-8919

Email: AccessibilityServices@com.edu

Location: COM Doyle Family Administration Building, Student Success Center

Textbook Purchasing Statement: A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Withdrawal Policy: Students may withdraw from this course for any reason prior to the last eligible day for a "W" grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1st 8-week session is October 2. **The last date to withdraw from the 16-week session is November 15.** The last date to withdraw for the 2nd 8-week session is November 26.

FN Grading: The FN grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The FN grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the FN grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an FN grade.

Early Alert Program: The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. I have been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you will be contacted by someone in the Student Success Center who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

Resources to Help with Stress:

If you are experiencing stress or anxiety about your daily living needs including food, housing or just feel you could benefit from free resources to help you through a difficult time, please click here <https://www.com.edu/community-resource-center/>. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of

Students office at deanofstudents@com.edu or communityresources@com.edu.

Nondiscrimination Statement:

The College District prohibits discrimination, including harassment, against any individual on the basis of race, color, religion, national origin, age, veteran status, disability, sex, sexual orientation, gender (including gender identity and gender expression), or any other basis prohibited by law. Retaliation against anyone involved in the complaint process is a violation of College District policy.