



BIOL-2402-106C3
Anatomy & Physiology II
Fall 2025 - In-Person
Tuesday-Thursday 9:30AM – 12:20PM
Steam Bldg. #22 Room 340

Instructor Information: Professor Ahmed Alhumairi, aalhumairi@com.edu, 409-933-8595

Office hours and location: On-campus in STEAM Bldg. STE325-22

In-Person

- Monday 9:20am – 11:00am, 4:55pm - 5:30pm
- Tuesday 9:10am – 9:30am, 1:20pm-2:00pm, 4:55pm - 5:30pm
- Wednesday 9:20am – 11:00am, 4:55pm - 5:30pm
- Thursday 9:10am – 9:30am, 1:20pm-2:00pm, 4:55pm - 5:30pm

Required Textbook/Materials:

- Hoehn, K., Haynes, L., Abbott, M., 2024. Marieb Human Anatomy and Physiology, 12th ed. Boston, MA; Pearson Education, Inc. (The e-book version is purchased at the time of registration and you will gain access to the online materials once you are in Brightspace/D2L when classes begin.)
- Amerman, E., 2017. Exploring Anatomy & Physiology in the Laboratory, 4th edition. Englewood, Colorado, Morton Publishing Company (customized for COM) ISBN-13: 978-1-61731-955-6 (Lab Manual - **PURCHASE REQUIRED**)
- Web camera (either built into your computer or attachable) to take quizzes and exams.
- Pearson Lockdown Browser and/or Respondus Lockdown Browser
- Color pencils (12 count)

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 in 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. The lab provides hands-on 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). **Prerequisites:** TSI Reading 351 or IRW 0320 and BIOL 2401 with a grade of "C" or better

In this course, you will study human anatomy and physiology using a variety of educational resources. Some materials include medically accurate depictions of the human body, which may involve full or partial nudity and reproductive anatomy. These images are presented solely for scientific and educational purposes.

Course Structure:

- **In-Person Lecture Component:** Weekly lectures provide the foundational knowledge necessary for understanding human anatomy and physiology. Lectures will cover key concepts, supported by multimedia resources such as videos, diagrams, and interactive simulations. **Students are recommended to watch the multimedia resources before attending the corresponding lecture/lab session.** In-class quizzes will be administered at the beginning of each lab to assess comprehension of the lecture material.
- **In-Person Lab Sessions:** The in-person lab meets weekly, offering hands-on experience with anatomical models, dissections, and physiological experiments. Labs are designed to reinforce and expand upon the material covered in the lectures. Tardiness may result in an absence. Please see College of the Mainland's policy below for more details. This sentence is bonus, copy it into your syllabus quiz question #5.

Course requirements:

Lecture Exams & Comprehensive Final Exam: There are four lecture exams and one Comprehensive Final Exam (CFE) (all in-person). Each lecture exam will include multiple-choice, matching, true/false, and identification questions. Exam tentative dates are listed in the syllabus. The final exam may also be incorporated into a project or presentation.

Lecture/Chapter Assignments: There will be up to 14 chapter assignments throughout the course, these assignments will be conducted using the student's laptop/tablet via Pearson portal.

Mini-Quizzes: There will be up to 14 lecture mini-quizzes (all in-person) throughout the course, each for 5 minutes for no more than 5 questions per mini-quiz. The mini quizzes will be conducted using the student's laptop/tablet. Mini-Quiz dates will be announced regularly using D2L announcements (usually on the week after that chapter is covered in completion).

Lab Activities: There are 12 in-person lab activities. Recommended to watch Lecture/Lab videos before the lab to fully understand the material. Appropriate lab attire is required to participate in the in-person lab activities. Leaving the lab more than 15 minutes early will result in a point reduction.

Lab Practical's: There will be three lab practical exams during this course. These exams will be taken in class, and the tentative dates are listed in the syllabus. The practical exams will cover models covered during lab session.

Professionalism: All email and in-person communication must remain respectful toward both myself and your fellow classmates. This is a safe space, and I welcome respectful concerns, comments, and constructive criticism.

Professionalism accounts for 2% of your grade; please ensure you identify your name and class in your emails and provide a clear explanation of the purpose. Professionalism also includes being prepared for lab. For more details, refer to the professionalism document. All emails must be sent from your COM email account—emails from personal addresses will NOT be opened.

Expectations inside the classroom:

- Refrain from side conversations during lectures and presentations.
- Raise your hand if you have a question or wish to contribute to the discussion.
- Wait for designated break times or after class to discuss anything unrelated to the class.
- **NO FOOD OR DRINKS ALLOWED INSIDE THE CLASS** (only secured water bottles allowed)

The goal is to create a classroom where everyone feels respected and can learn effectively. This can be achieved by working together to ensure positive and effective learning environment for everyone in the class.

A warning will be issued for the first incident, but any continued disruptive behavior will result in further disciplinary action, please read through the “[Standards of Student Conduct](#)” in the Student Handbook for a more complete description of these issues and your rights and responsibilities.

Bonus Points: Bonus Points are not a formal part of the course requirements; they are awarded at the instructor's discretion. Throughout the semester, there will be multiple opportunities to earn extra points, including through Mastering A&P. All bonus points will be added to an exam or practical. However, no exam or practical will receive more than 10 bonus points, regardless of how many a student has earned.

Determination of Course Grade/Detailed Grading Formula:

Course Assessment	Total Points	Percentage of Course
LECTURE PORTION	700 points	70.0%
Online Syllabus Quiz	10 points	1.0%
Professionalism	24 points	2.4%
Chapter Mini-Quizzes (14)	70 points	7.0 %
Chapter Assignments (14)	196 points	19.6 %
Lecture Exams (4, drop lowest)	300 (100 pts each)	30.0 %
Comprehensive Final Exam	100 points	10.0%
LAB PORTION	300 points	30.0%
Lab Safety Quiz	12 points	1.2%
Lab Activities (9)	108 (12pts vary per quiz)	10.8%
Lab Practical's (3, drop lowest)	180 (90 pts each)	17.0%
TOTAL POINTS	1000 points	100%

Grading Scale:

A = A sum of the points earned throughout the course between 900 and 1000 points

B = A sum of the points earned throughout the course between 800 and 899 points

C = A sum of the points earned throughout the course between 700 and 799 points

D = A sum of the points earned throughout the course between 600 and 699 points

F = A sum of the points earned throughout the course below 600 points

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

I = An incomplete may be assigned at the discretion of the instructor in accordance with the policy

W = A withdrawal may be assigned in accordance with college policy

Science Lab Policy (Please Read Carefully)

This course consists of both a lecture and laboratory grade component. Students must earn a **70% or better** in the laboratory component to successfully pass the course. **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: Make-up exams are permitted at the discretion of the instructor. Documentation will be necessary for make-up allowance. Once granted permission for make-up, a **student will have 7 days to make up the exam. If a student misses the 7-day deadline no make-up will be permitted.** Only one make-up exam allotted per semester during finals week.

Lab Practical's': Make-up Lab Practical's are permitted at the discretion of the instructor. Documentation will be necessary for make-up allowance. Only one make-up exam allotted per semester during finals week.

Assignments: Make-up Assignments are permitted at the instructor's discretion; please contact the instructor if you need to make up an assignment. **Habitual missed assignments will be denied (more than two).** Lab Activities will not be allowed a make-up, no exceptions.

Attendance Policy:

This course requires students to attend lab sessions to complete mandatory laboratory exercises. **Missing three required lab meetings will result in an 'F' for the course, unless there is a documented excuse approved by the instructor** (e.g., illness or death in the family, subject to the instructor's discretion, with documentation required). If a student is more than 10 minutes late, they will be marked absent. Similarly, if a student leaves 15 minutes or more before the end of class, they will also be marked absent.

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. **(NOTE: I will not answer emails from personal email addresses)**

Student Learner Outcome	Maps to Core Objective	Assessed via this Assignment
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1. Use anatomical terminology to identify and describe locations of major organs of each system covered.		Exam 1-4
2. Understand interrelationships among molecular, cellular, tissue, and organ functions in each system.		Exam 1-4
3. Describe the interdependency and interactions of the systems.		Systems Case Study
4. Explain contributions of organs and systems to the maintenance of homeostasis.	CT	Systems 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.		
7. Apply appropriate safety and ethical standards.		Lab activities
8. Locate and identify anatomical structures.		Lab Practical 1-3
9. Appropriately utilizing laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations.		Lab Practical 1-3
10. Work collaboratively to perform experiments.	TW	Lab activities
11. Demonstrate the steps involved in the scientific method.		Conductivity Lab
12. Communicate results of scientific investigations, analyze data and formulate conclusions.	CS	Conductivity Lab
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	Conductivity Lab

Academic Dishonesty: Disciplinary actions will be taken for students who exhibit disorderly conduct, cheat on exams, submit plagiarized work (see below), or are involved in collusion (helping others cheat or plagiarize) as defined in the Student Handbook under the heading, “Discipline and Penalties.” The minimum penalty will be 0 on the assignment or exam. 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 contact information previously provided. If, after discussing your concern with

me, you continue to have questions, please contact Sheena Abernathy Chair of the Science Department at 409-933-8330 or by email: sabernathy@com.edu .

Course outline: (This schedule is tentative)

	Week #	Lecture: In-Person	Laboratory: In-Person	Due Monday
1	Aug. 19 – Aug. 21	CH16: The Endocrine System	Lab Safety Ex. 16-1 (Endocrine System Anatomy) Ex. 16-2 (Endocrine Organ Histology) Ex. 16-4 (Endocrine “Mystery Cases”)	Syllabus Quiz
2	Aug. 26 – Aug. 28	CH17: The Blood	Ex. 20-1(Blood Composition Ex. 20-2 (ABO & Rh Blood Groups) Ex. 20-4 (Blood Donation)	Chapter 16 MiniQuiz
3	Sep. 2 – Sep. 4	CH18: The Heart	Ex. 17-1 (Anatomy of the Heart) Ex. 17-2 (Cardiac Muscle Histology)	Chapter17 MiniQuiz
4	Sep. 9 – Sep. 11	CH19: Blood Vessels	HEART DISSECTION Ex. 19-1 (Heart Auscultation) Ex. 19-5 (ECG) Vernier EKG Handout	Chapter 18 MiniQuiz Exam 1
5	Sep. 16 – Sep. 18	CH20: Lymphatic System	Ex. 18-1 (Major Arteries of Body) Ex. 18-2 (Major Veins of Body) Ex. 18-3 (Time to Trace!) Ex. 19-5 (Clinical Applications) Ex. 19-3 (Blood Pressure) Practical 1	Chapter20 MiniQuiz
6	Sep. 23 – Sep. 25	CH21: Immunity CH22: Respiratory	Ex. 20-3 (Murder Mystery Game) Ex. 21-1 (Lymphatic Sys. Anatomy) Ex. 21-2 (Lymphatic Organ Histology) Ex. 21-3 (The Immune Response)	Chapter 19 MiniQuiz
7	Sep. 30 – Oct. 2	CH22: Respiratory	Exam 2	Chapter 21 MiniQuiz
8	Oct. 7 – Oct. 9	CH23: Digestive System	Ex. 22-1 (Respiratory Anatomy) Ex. 23-2 (Pulmonary Vol. & Capacities) Ex. 23-3 (pH and Ventilation) Construct a Lung Handout	Chapter 22 MiniQuiz
9	Oct. 14 – Oct. 16	CH24: Nutrition	Ex. 24-1 (Digestive System Anatomy) Lactase Enzyme Activity Lab Ex. 24-4 (Time to Trace!)	Chapter 23 MiniQuiz Practical 2
10	Oct. 21 – Oct. 23	CH25: The Urinary System	Ex. 25-1 (Urinary System Anatomy) Exam 3	Chapter24 MiniQuiz
11	Oct. 28 – Oct. 30	CH26: Fluid Balance	Ex. 26-1 (The Model Kidney) Ex. 26-3 (Time to Trace!) Urinalysis Handout	Chapter 25 MiniQuiz
12	Nov. 4 – Nov. 6	CH27: Reproductive System	Ex. 27-1 (Male Reproductive Anatomy)	Chapter 26 MiniQuiz

			Ex. 27-2 (Female Reproductive Anatomy)	
13	Nov. 11 – Nov. 13	Withdraw Day (11/14) CH28: Development	PIG DISSECTION Exam 4	Chapter 27 MiniQuiz
14	Nov. 18 – Nov. 20	CH29: Heredity	Ex. 28-1 Fertilization and Implantation Ex.28-2 Embryogenesis, Ex. 28-3 Heredity PIG UTERUS DISSECTION (OPTIONAL)	Chapter 28 MiniQuiz Chapter 29 MiniQuiz
15	Nov. 25 – Nov. 27	No Lecture Video	Final Exam	N/A
16	Dec. 2 – Dec. 4	No Lecture Video	Lab Practical 3	N/A

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/student-handbook.html>. *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 accommodation 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 1. The last date to withdraw from

the 16-week session is **November 14**. The last date to withdraw for the 2nd 8-week session is November 25.

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.