



**BIOL 2402.105H3**  
**Anatomy & Physiology II**  
**Fall 2025**  
**Hybrid Course In-Person Lab Only**  
**Monday 2:00pm – 4:50pm**  
**Steam Bldg. #22 Room 334**

**Instructor Information: Dr. Likely, [rlikely@com.edu](mailto:rlikely@com.edu)**

**Office hours and location:** Virtually via Teams

- Monday 1:00pm – 2:00pm

**Required Textbook/Materials:**

- Marieb, E.N. & Hoehn, K., 2019. Human Anatomy and Physiology, 11th ed. Boston, MA; Pearson Education, Inc. (eBook via VitalSource already loaded in Brightspace = NO PURCHASE REQUIRED)
- 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 Manu
- **Web camera** (either built into your computer or attachable) to take quizzes.
- **Respondus Lockdown Browser**

**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. The lab provides a 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.**

**Course Structure:**

- Online Lecture Component: Weekly online 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 required to watch the online lecture before attending the corresponding lab session. In-class quizzes will be administered at the beginning of each lab to assess comprehension of the lecture material. Failure to complete the lecture before the lab may impact the student's ability to participate fully in lab activities. Google Chrome is the recommended web browser.

- **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 online lectures. Attendance is mandatory, 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.

### **Course requirements:**

**Lecture Exams & Comprehensive Final Exam:** There are four in-person exams and one in-person Comprehensive Final Exam (CFE). Each lecture exam will include a mix of multiple-choice, fill-in-the-blank, matching, true/false, essay, and identification questions. Exam dates are listed in the syllabus. The final exam will also incorporate a project or presentation.

**Lecture Quizzes:** There are four lecture quizzes throughout the course, each with a set time limit for answering the questions. The quizzes will be conducted online, and Respondus Lockdown Browser is required. Lecture quiz due dates are listed in the syllabus.

**Chapter Quizzes:** You will have online chapter quizzes each week totaling to fifteen. Due dates are listed in the syllabus document you will access via D2L from day one.

**Lab Activities:** There are 12 in-person lab activities. Lecture videos must be watched before the lab to fully understand the material. The concepts and lab activities will appear on the two scheduled Lab Practicals. Each week, the lab activity worksheet must be submitted at the end of class to receive credit. No make-up sessions are allowed. 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 two lab practicals during this course. These exams will be taken in class, and the dates are listed in the syllabus. The practicals will cover concepts, models, and activities completed in the lab or outlined in the lab manual.

**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 1.0% 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.

**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
<b>LECTURE PORTION</b>	<b>700 points</b>	<b>70.0%</b>
Online Syllabus Quiz	5 points	0.5%
Professionalism	10 Points	1.0%
Chapter Quizzes (15)	200 (pts vary per quiz)	20.0 %
Lecture Quizzes (4)	80 (20 pts each)	8.0 %
Lecture Exams (4)	340 (85 pts each)	34.0 %
Comprehensive Final Exam	65 pts	6.5%
<b>LAB PORTION</b>	<b>300 points</b>	<b>30.0%</b>
Lab Safety Quiz	10 points	1.0%
Lab Activities (12)	120 (pts vary per quiz)	12.0%
Lab Practical's (2)	170 (85 pts each)	17.0%
<b>TOTAL POINTS</b>	<b>1000 points</b>	<b>100%</b>

**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. 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.

**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. (Faculty may add additional statement requiring monitoring and communication expectations via D2L or other LMS). **I will not answer emails from personal email addresses.**

Student Learner Outcome (SLO)	Maps to Core Objective(s)	Assessed via this Assignment
1. Use anatomical terminology to identify and describe locations of major organs of each system covered.		Exam 1-4
2. Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.		Exam 1-4
3. Describe the interdependency and interactions of the systems.		Exam 1-4
4. Explain contributions of organs and systems to the maintenance of homeostasis.	CT	Urinalysis Lab
5. Identify causes and effects of homeostatic imbalances.	CS	Urinalysis Lab
6. Describe modern technology and tools used to study anatomy and physiology.		Lab Practical 1 & 2
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	Urinalysis Lab
11. Demonstrate the steps involved in the scientific method.		Differential WBC Count
12. Communicate results of scientific investigations, analyze data and formulate conclusions.		Ex 19-2 Blood Typing
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	Urinalysis 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 a 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](mailto:sabernathy@com.edu)

**Course outline:** *This schedule is tentative*

Week #	Lecture:	Laboratory:	Due Sunday: Online
1. Aug. 18 – Aug. 24	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 Chapter 16 Quiz Lab Safety Quiz
2. Aug. 25 – Aug 31	CH17: The Blood	Ex. 20-1 (Blood Composition) Ex. 20-2 (ABO & Rh Blood Groups) Ex. 20-4 (Blood Donation)	Chapter 17 Quiz
3. Sept. 1 – Sept. 7	CH18: The Heart	Ex. 17-1 (Anatomy of the Heart) Ex. 17-2 (Cardiac Muscle Histology)	Chapter 18 Quiz Lecture Quiz 1 ONLINE
4. Sept. 8 – Sept. 14	<b>Exam 1:</b> (Ch. 16, 17, 18) CH19: Blood Vessels	Ex. 19-1 (Heart Auscultation) Ex. 19-5 (ECG) Vernier EKG Handout	Chapter 19 Quiz
5. Sept. 15 – Sept. 21	CH20: Lymphatic System	Ex. 18-1 (Major Arteries of Body) Ex. 18-2 (Major Veins of Body) Ex. 19-3 (Blood Pressure)	Chapter 20 Quiz
6. Sept. 22 – Sept. 28	CH21: Immunity CH22: Respiratory	Ex. 20-3 (Murder Mystery Game) Ex. 21-1 (Lymphatic Sys. Anatomy) Ex. 21-2 (Lymphatic Organ Histology)	Chapter 21 Quiz
7. Sept. 29 – Oct. 5	CH22: Respiratory	(Lab Review) <b>Lab practical 1</b>	Chapter 22 Quiz Lecture Quiz 2
8. Oct. 6 – Oct. 12	CH23: Digestive System <b>Exam 2:</b> (Ch.19, 20, 21, 22)	Ex. 22-1 (Respiratory Anatomy) Ex. 23-2 (Pulmonary Vol. & Capacities) Construct a Lung Handout	Chapter 23 Quiz

9. Oct. 13 – Oct. 19	CH24: Nutrition	Ex. 24-1 (Digestive System Anatomy) Lactase Enzyme Activity Lab	Chapter 24 Quiz
10. Oct. 20 – Oct. 26	CH25: The Urinary System	Ex. 25-1 (Urinary System Anatomy) Kidney Dissection	Chapter 25 Quiz
11. Oct. 27 – Nov. 02	CH26: Fluid Balance	Ex. 26-1 (The Model Kidney) Urinalysis Handout	Chapter 26 Quiz <a href="#">Lecture Quiz 3</a>
12. Nov. 03 – Nov. 09	CH27: Reproductive System <b>Exam 3:</b> (Ch. 23, 24, 25, 26)	Ex. 27-1 (Male Reproductive Anatomy) Ex. 27-2 (Female Reproductive Anatomy)	Chapter 27 Quiz
13. Nov. 10 – Nov. 16	CH28: Development	PIG DISSECTION	Chapter 28 Quiz
13. Nov. 17 – Nov. 23	<b>Withdraw Day (11/14)</b> CH29: Heredity <b>Exam 4:</b> (Ch. 27, 28, 29)	Ex. 28-1 (Fertilization and Implantation) Ex. 28-2 (Embryogenesis) Ex. 28-3 (Heredity) Pig Uterus Dissection (Optional)	Chapter 29 Quiz <a href="#">Lecture Quiz 4</a>
14. Nov. 24 – Nov. 30	No Lecture Video	<b>Lab Practical 2</b>	N/A
15. Dec. 01 – Dec. 05	<b>Final Exam</b>	N/A	N/A

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## 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](mailto: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 1<sup>st</sup> 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 2<sup>nd</sup> 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](mailto:deanofstudents@com.edu) or [communityresources@com.edu](mailto: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.