



BIOL-2402-223CL
Anatomy and Physiology II
Spring 2022

Tue & Thu, Lecture - Lab 6:00-8:50pm (STE-340)

Instructor Information: Alex Peniche, Ph.D., apenichetrujill@com.edu, 409-933-8244
(Administrative Assistant Delores Fernandez)

Student (Office) hours and location:

Office Hours: Before class or by appointment

Location: STE-340 or Blackboard Virtual Office

Required Textbook/Materials:

Textbook: Marieb, E.N. & Hoehn, K., 2019. *Human Anatomy and Physiology, 11th edition* (eText), Boston, MA; Pearson Education, Inc. Publisher bundled with MODIFIED Mastering A&P on-line component. ISBN13: 978-0-13-458099-9. This e-book and the Modified Mastering A&P are purchased at the time of registration through VitalSource and you will gain access to them in Blackboard on first day of class.

Lab manual: Amerman, E., 2017. *Exploring Anatomy & Physiology in the Laboratory, 3rd edition*; Englewood, Colorado, Morton Publishing Company (customized for College of the Mainland). ISBN-13: 978-1-61731-955-6. You will have to buy this; it is **not** part of registration payments.

Software & hardware: The minimum computer and internet configurations required include:

- ❖ Computer with up-to-date operating systems from Microsoft (PC) or Apple (Mac). Mobile devices may not be compatible with all the online course components.
- ❖ Wi-fi/Internet access
- ❖ Blackboard-supported web browser (Chrome, Firefox, Safari, etc.)
- ❖ Your COM e-mail account
- ❖ Respondus Lockdown Browser (tutorial: <https://youtu.be/XuX8WoeAycs>)

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.

Course requirements: BIOL 2401 with a grade of "C" or better.

Determination of Course Grade/Detailed Grading Formula:

Lecture Exams

Counts for 75% of the final course grade. Five (5) exams (15% each) will be administered. Exams will consist of a combination of multiple choice, short answer and essay questions. The material covered by each exam is listed on the syllabus. To prepare for an exam, students must read, understand, and master all chapters to be examined. It is very important that students understand the terms, and complete exercises at the end of each chapter. Some of them will be used as exam questions. No phones or other electronic or communication equipment are allowed during exams. In the event that examinations are moved into on-line format due to changes in COVID19 guidelines, Respondus lockdown browser will be required.

Laboratory and laboratory reports

Grade is earned from individual laboratory assignment using Blackboard on dates indicated in the section "Course outline". Laboratory assignments consist of a combination of identify, multiple choice, and short answer based on laboratory manual. The material covered by assignment is listed on the section "Course outline". Failure to submit Laboratory assignment in Blackboard will be scored as a zero (0) toward the laboratory grade average. There will be no make-ups for missed laboratories or laboratory reports.

Quizzes (bonus Points)

Here an opportunity for you to earn bonus points. Bonus points are not part of the course requirements so any bonus points earned will help your grade and any bonus points not taken will not affect your grade negatively.

No make-up opportunity will be allowed for Quizzes once the due date has passed unless you can provide documentation for an emergency that keeps them away from taking the quiz that is approved by me. In the event that examinations are moved into on-line format due to changes in COVID19 guidelines, Respondus lockdown browser will be required.

Presentations (bonus Points)

Here another opportunity for you to earn bonus points. Bonus points are not part of the course requirements so any bonus points earned will help your grade and any bonus points not taken will not affect your grade negatively. Presentation requires that students survey the scientific literature (peer reviewed journals) related to the "clinical applications" section from book chapters 16-29. Students should submit me via email the subject proposed for presentation. Presentation dates will be organized according to assignment arrival. The presentation should be planned for 15 min (~10 slides), plus 5 min dedicated for discussion. All presentations should be made on PowerPoint file format. Please do not use readymade presentation material available on the internet. Student should present his/her understanding of the subject, his concepts and perception of the scientific matter analyzed by the paper.

Determination of Course Grade/Detailed Grading Formula:

All grades matters!!. Keep track of your class grades as reflection of your knowledge, skills, or both, rather than effort. Evaluation will be based on the following and weighted as indicated:

Lecture: Counts for 75% of the final course grade. Five (5) exams (15% each) will be administered

Laboratory: Counts for 25% of the final course grade.

Grading Scale:

A – A weight of the points earned for course assessments that equals 90% or more

B – A weight of the points earned for course assessments that equals between 80% and 89% inclusive

C – A weight of the points earned for course assessments that equals between 70% and 79% inclusive

D – A weight of the points earned for course assessments that equals between 60% and 69% inclusive

F – A weight of the points earned for course assessments that equals 59% or less, or for lab assessment that fails to meet either the lab science policy or the lab attendance policy.

FN – A weight of the points earned for course assessments that equals 59% or less due to poor participation.

I – An incomplete may be assigned at the discretion of the instructor in accordance with the college policy.

W – A withdrawal may be assigned in accordance with college policy.

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

Do not turn in any assignment late. Substantial number of points, up to 100%, may be deducted.

Extra credit

Extra credit assessments are dependent on your attendance. If a student has total attendance below 85%, he/she may not be eligible for extra credit points. Any completed and graded extra credit assignment by such student may not be applied in the final grade calculation.

Make-up

There will be make-up for in-class quiz missed due to a documented excused absence. There may be a maximum of one (1) make up, at the instructor's discretion, for in-class lecture exam missed due to an excused absence. If one must miss a lecture exam because of an emergency, he/she must contact the instructor before the start of the scheduled exam and provide documentation as legitimate proof of the absence! Arrangements may be made for him/her to take the exam at a time not later than 24 hours after the scheduled date. If you know in advance that you will be unable to attend an exam, you may take the exam earlier than scheduled.

Lab Science Policy

The grade for this course consists of both lecture and laboratory components. Students must earn a 70% or better in the laboratory component to 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.

Attendance Policy:

Attendance, participation, and punctuality are critical both to understanding of the course materials and to success in this class. I do know that circumstances such as death in the family, illness, etc. come up unexpectedly and may cause a student to be tardy or miss a class. I expect that the student would make every effort to come to class/lab on time, and that I would be contacted if he/she is

running late or need to miss class. This does not automatically grant or guarantee excused absence. The student must provide a documentable evidence, such as a doctor's report (written in English) for me to approve the absence as excused. A student with excused absence may, where possible, be rescheduled for the missed lab activity. This policy includes lecture and lab.

- Attendance is taken every session.
- If a student accumulates 2 lecture absences and/or lab absences in a row, or misses a due required assessment, I will submit his/her name to the **Early Warning System**.

Lecture attendance

Lecture attendance is taken at the beginning of class (10 minutes after class begins). A student who misses lecture risks missing quizzes, which are usually taken at the beginning of class.

Tardiness and early leave

Tardiness, recorded in attendance register as partial attendance, may result in an absence if the student is not present without excuse 35 minutes after attendance is taken. It may prevent a student from participation in lab activities. Do not leave early! Unexcused early leaving, less than 45 minutes after class or lab has started, counts as tardiness.

Additional Policies regarding Course Communication, Lab Use and Test Taking

If you are having difficulty with the course material, please contact me via email to discuss or to make an appointment. The following rules apply to all students during lecture or lab. One who fails to obey them violates the civility and academic integrity codes. If during a test, the student will get a "0" for the exam or quiz. A repeat violation may get the student ultimately dropped from class.

- No restroom trips during a in-class exam/quiz.
- Use of phones/electronics or accessories for texting, chatting, etc during class is not allowed.
- All phones & electronic accessories must be turned off and put away during every test.

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 Blackboard or other LMS)

Student Learner Outcome	Maps to Core Objective	Assessed via this Assignment
1. Use anatomical terminology to identify and describe locations of major organs of each system covered.		Diagram questions on Exams 1-5
2. Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.		Questions on Exams 1-5
3. Describe the interdependency and interactions of the systems.		Group Case-Study Activities
4. Explain contributions of organs and systems to the maintenance of homeostasis.	Critical Thinking	Essay Questions on Lecture Exams 1,2 and 3
5. Identify causes and effects of homeostatic imbalances.	Communication Skills	Student presentations, Lab reports
6. Describe modern technology and tools used to study A&P		Lab reports
7. Apply appropriate safety and ethical standards.		Lab reports

8. Locate and identify anatomical structures.		Lab reports
9. Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations.		Lab reports
10. Work collaboratively to perform experiments.	Teamwork	Construct a Lung Experiment
11. Demonstrate the steps involved in the scientific method.		Exercise 25-1 The Model Kidney w/ added Hypothesis
12. Communicate results of scientific investigations, analyze data and formulate conclusions.		Exercise 19-2 Blood Typing and Exercise 19-3 Murder Mystery
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.	Empirical & Quantitative Skills	Urinalysis Experiment within Laboratory Assignment
1. Use anatomical terminology to identify and describe locations of major organs of each system covered.		Diagram questions on Exams 1-5
2. Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.		Questions on Exams 1-5

Academic Dishonesty: Academic dishonesty includes activities and behaviors such as cheating on tests, collusion, and plagiarism (the practice of taking someone else's work or ideas and passing them off as one's own). 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 and/or plagiarize). The consequences for violating the academic integrity include one or more of a zero score for the test/assignment, "F" grade in the course, and withdrawal from the class. The student may also be referred to the Vice President of Student Success and Conduct for further disciplinary action including dismissal from the college.

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 Sheena Abernathy, the Science Department Chair, at 409-933-8330 or sabernathy@com.edu.

Course outline: This is a tentative schedule of lecture and laboratory activities and may be subject to change as the course proceeds. Students will be notified in class and posted/uploaded in the Blackboard. It is the student's responsibility to check the Blackboard for amendments or updates to the syllabus.

Week	Date	Topic	Laboratory - Topic	Due date
1	1/18-20	Ch16: Endocrine System	Lab Safety, Ex. 16-1 Endocrine Glands Ex. 16-2 Endocrine Organ Histology	1/27
2	1/25-27	Ch18: The Cardiovascular System: The Heart	Ex. 17-1 Anatomy of the Heart	2/3
3	2/1-3	Ch19: The Cardiovascular System: Blood Vessels	Ex 19-5 ECG & Vernier EKG Handout, Ex 19-1 (Auscultation), Ex 19-2 Vascular Examination	2/8
4	2/8-10	Ch19: The Cardiovascular System: Blood Vessels	Ex 18-1 Major Arteries, Ex 18-2 Major Veins, Ex 14-4 ANS (Blood pressure)	2/17
	2/10	Exam 1 (Ch 16, 18, 19)		
5	2/15-17	Ch17: Blood	Ex 20-1 Formed Elements of Blood	2/24

		Ch 21: The Immune System: Innate and Adaptive Body Defenses	Ex 20-2 ABO & Rh Blood Groups	
6	2/22-24	Ch 20: The Lymphatic System and Lymphoid Organs and Tissues	Ex 20-3 Murder Mystery Game, Ex 21-1 Lymphatic System Anatomy, Ex 21-2 Lymphatic Organ Histology	3/3
7	3/1-3	Ch 20: The Lymphatic System and Lymphoid Organs and Tissues		
	3/3	Exam 2 (Ch 17, 20, 21)		
8	3/8-10	Ch 22: The Respiratory System	Ex 22-1 Respiratory Anatomy, Ex 23-2 Measuring Pulmonary Volumes & Capacities. Construct a Lung Handout	3/24
9	3/15-17	Spring Break, College closed		
10	3/22-24	Ch23: The Digestive System Ch24: Nutrition, Metabolism, and Energy Balance	Ex 24-1 Digestive System Anatomy Ex 2-3 Enzymes & Chemical Reactions	3/31
11	3/29-31	Ch24: Nutrition, Metabolism, and Energy Balance	PIG Dissection	4/7
	3/31	Exam 3 (Ch 22,23,24)		
12	4/5-7	Ch 25: The Urinary System	Ex 25-1 Urinary System Anatomy Kidney Dissection	4/14
13	4/12-14	Ch 26: Fluid, Electrolyte, and Acid-Base Balance	Ex 26-1 The Model Kidney Urinalysis Handout	
14	4/19-21	Ch 26: Fluid, Electrolyte, and Acid-Base Balance	Exercise 26-1 The Model Kidney Urinalysis Handout	4/21
	4/21	Exam 4 (Ch 25,26)		
15	4/26-28	Ch 27: Reproductive System	Pig Uterus Dissection, Developmental Models, Pregnancy Kit/ Barrier Lab Handout	5/5
16	5/3-5	Ch 28: Pregnancy and Human Development	Student presentations	
17	5/10	Exam 5 (Ch 27-28)		

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://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.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.* https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.pdf

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 Holly Bankston at 409-933-8520 or hbankston@com.edu. The Office of Services for Students with Disabilities is located in the Student Success Center.

Counseling Statement: Any student needing counseling services is requested to please contact Holly Bankston in the student success center at 409-933-8520 or hbankston@com.edu. Counseling services are available on campus in the student center for free and students can also email counseling@com.edu to set up their appointment. Appointments are strongly encouraged; however, some concerns may be addressed on a walk-in basis.

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 March 2. The last date to withdraw from the 16-week session is April 25. The last date to withdraw for the 2nd 8-week session is May 4.

F_N Grading: The F_N grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The F_N 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 F_N grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an F_N 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.

COVID-19 Statement: All students, faculty, and staff are expected to familiarize themselves with materials and information contained on the College of the Mainland’s Coronavirus Information site at www.com.edu/coronavirus. In compliance with Governor Abbott's May 18 Executive Order, face coverings/masks will no longer be required on COM campus. Protocols and college signage are being updated. We will no longer enforce any COM protocol that requires face coverings. We continue to encourage all members of the COM community to distance when possible, use hygiene measures, and get vaccinated to protect against COVID-19. Please visit com.edu/coronavirus for future updates.