



BIOL-2402-151HY
Anatomy & Physiology II
Spring 2021
08:00AM - 11:20AM, Saturday

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

Student hours and location: Saturday's 11:30 AM – 12:30 PM (virtual) using Blackboard Collaborate. Students should feel free to email me any questions or concerns associated with this course to me (apenichetrujill@com.edu), at I will attempt to respond to all emails within 24 hours.

Required Textbook/Materials:

(etext) Marieb, E.N. & Hoehn, K., 2019. Human Anatomy and Physiology, 11th edition, Boston, MA; Pearson Education, Inc. bundled with MODIFIED Mastering A&P on-line component. ISBN-13: 9780134763415. *These required materials were purchased at the time of registration through Vital Source and you will gain access to these in Blackboard when classes begin.*

(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

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:

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, complete exercises and study guides at the end of each chapter. Some of them will be used as exam questions. The instructor reserves the right to use Respondus lockdown browser before/during a test is administrated. No phones or other electronic or communication equipment are allowed during exams.

Laboratory and laboratory reports

Grade is earned from individual laboratory reports and original work presented by each student. Students are expected to have read text/laboratory assignments before coming to laboratory days. Each student should bring their lab manual, and textbook. Laboratory reports must also include original drawings and sketches of observations performed during each session. Shorter or incomplete reports will result in deduction of substantial amount of points or even a grade zero (0) for that specific report. Failure to turn in laboratory reports on the deadline above will be reported and scored as a zero (0) toward the laboratory grade average. Being absent from class/labs is not an excuse for failing to turning in reports. Grade is earned from individual laboratory assignment using Blackboard on dates indicated in the section “Course outline”. There will be no make-ups for missed laboratories or laboratory reports.

To abide the institutional policy on social distancing for Face to Face labs, class will be divided in two groups. Group 1 will work from 8:00 to 9:30 AM; and group 2 from 9:50 to 11:20 AM. Labs will take place on Campus Science Bldg. #9, Room 137. Please remember that when in COM facilities you must wear face coverings when indoors as well as when outdoors within 6 feet of others. Also Labs requires not to wear open toes shoes.

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: The resulting percentage at the end of the semester will represent your final grade which is turned to the Admissions Office as a grade letter as follows: A = 90 – 100%; B = 80 – 89%; C = 70 – 79%; D = 60 – 69%; F = < 60%; 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.

The grade for this course consists of both a lecture and laboratory 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.

Lab Science Policy

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: If a student misses a test, a zero (0) will be earned. Exams will be taken using a computer-based/online/Blackboard in order to get credit; otherwise a zero (0) will be earned. The instructor reserves the right to use Respondus before/during a test is administrated. If you miss an exam, you will automatically be allowed to make-up the exam with a documented excuse approved by me. You will have to provide legitimate proof for your excuse in the case of missing an examination. Make-up exams may be allowed for other reasons that cannot be documented and will be decided by me on an individual basis and you will have to agree to a designated time decided by me. Only one undocumented make-up exam will be allowed per student for the duration of the class.

Extra-Credit

Quizzes (extra credit): Here an opportunity for you to earn bonus points. Extra credit is not a course requirement, so quizzes not taken will not affect your grade negatively.

The instructor reserves the right to use Respondus lockdown browser before/during a test is administrated. 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.

Presentations (extra credit): There will be opportunities for you to earn bonus points. Extra credit is not a course requirement, so not doing Presentation will not affect your grade negatively.

Presentation are a good opportunity to earn bonus points, requires that students survey the scientific literature (peer reviewed journals) related to the “clinical applications” section from book chapters 16-28. 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.

Attendance Policy: Your attendance is critical to the success you will have in this course. I do know that illness, car problems, changes in work schedule and child daycare all come up unexpectedly and may cause you to be tardy or even miss a class. I expect the same level of courtesy as your employer/future employer in that you would make every effort to come to class on time and if you are running late or need to miss class that I would be contacted.

- Attendance is taken every class meeting and verified at the end of class. Do not leave class early!
- If you accumulate 3 absences in a row, I MUST submit your name to the Early Warning System and you will have to complete the program in order to register for classes next semester.
- Lab Assignment grades and some class-activity assignments are dependent on your attendance.
- Tardiness may result in an absence if not present when attendance is taken and may prevent you from participation in lab experiments or examinations.

A student is required to come to lab to complete the face-to-face laboratory exercises required in the laboratory component of this course. Absences in two required lab meetings will result in a

"F" for the course grade unless there is a documented excuse approved by the instructor (e.g. illness or death in the family).

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. 1. Use anatomical terminology to identify and describe locations of major organs of each system covered. | | Diagram questions on Exams 1-5 |
| 2. 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 | Course Project |
| 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: According to the Code of Conduct of the College of the Mainland (www.com.edu/student-services/student-handbook.php), students are adults who subscribe basic community rules which require that they not violate any municipal, state, or federal laws. Talking in class during lectures and disruptive behavior will not be tolerated. Students who do not follow the above policies will be asked to leave the room and will be reported to the Dean's/administrative

office for further disciplinary action. Please do not bring visitors or children to class without permission. No student may disrupt class; classmates or professors work or interfere with any other educational activity being performed by a member of the College community. Any student failing to abide these standards during scheduled College activities may be asked to leave that day's class or activity by the instructor or another college official. If the problem persists, the instructor should consult with the appropriate Dean or Division Coordinator concerning disciplinary action. If a student refuses a request to leave the classroom voluntarily, security can be summoned to remove the student so that the scheduled activity may resume without further disruption. The faculty member should promptly report the incident verbally and in writing to his or her instructional supervisor and/or Campus Security.

Cheating will not be tolerated at any time. When taking a test if the instructor even suspects someone of cheating, the exam will be taken away and the student will be given a zero. Also, signing in and leaving the classroom without instructor's approval is considered cheating. Cheating students will be reported to the Dean's / administrative office for further disciplinary action.

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 Mrs. Sheena Abernathy, Chair of the Science Department, at 409-933-8330, or by email: 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 of all changes.

Key:

FtF: Face to Face lab on Campus Science Bldg. #9, Room 137

On-line: Blackboard Collaborate session.

| Week | Date | Topic | Laboratory - Topic | Due date |
|------|------|--|--|----------|
| 1 | 1/23 | Ch16: Endocrine System | FtF Lab Safety, and LabCh16: Ex. 16-2 Endocrine Anatomy | 1/30 |
| 2 | 1/30 | Ch18: The Cardiovascular System: The Heart | FtF LabCh18: Ex. 17-1 Heart Anatomy Pig Heart | 2/06 |
| 3 | 2/06 | Ch19: The Cardiovascular System: Blood Vessels | FtF, LabCh19: Major Arteries of the Body, 18-2: Major Veins of the Body | 2/13 |
| 4 | 2/13 | Exam 1 (Ch 16, 18, 19) | FtF Ex.19-5 The Electrocardiogram | 2/20 |
| 5 | 2/20 | Ch17: Blood Ch 21: The Immune System: Innate and Adaptive Body Defenses | On-line mini-review Ch17 and Ch21 | |
| 6 | 2/27 | Ch 20: The Lymphatic System and Lymphoid Organs and Tissues | FtF LabCh21 Ex 20-1: Formed Elements (Cells) of Blood, LabCh17 & LabCh20: Ex 21-2: Lymphatic Organ Histology | 3/6 |
| 7 | 3/6 | Exam 2 (Ch 17, 20, 21) | FtF 20-2: ABO and Rh Blood Groups, 20-3: Murder Mystery Game | 3/13 |

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|----|------|---|---|------|
| 8 | 3/13 | Ch 22: The Respiratory System | FtF, LabCh22: Ex.22-1 Respiratory Anatomy and Lung Handout | 3/20 |
| 9 | 3/20 | Spring Break, College closed | Spring Break, College closed | |
| 10 | 3/27 | Ch23: The Digestive System Ch24: Nutrition, Metabolism, and Energy Balance | FtF, LabCh23: Exercise 24-1: Digestive System Anatomy, LabCh24 and ADD Ex. 2-3- Lipid Enzyme Digestion. | 4/3 |
| 11 | 4/3 | Spring Holiday, College closed | Spring Holiday, College closed | |
| 12 | 4/10 | Exam 3 (Ch 22,23,24) | FtF LabCh25: Ex. 25-1 Kidney Dissection & Models | 4/17 |
| 13 | 4/17 | Ch 25: The Urinary System Ch 26: Fluid, Electrolyte, and Acid-Base Balance | FtF LabCh25: Ex. 26-1 Glomerular Filtration, urinalysis | 4/24 |
| 14 | 4/24 | Exam 4 (Ch 25,26) | LabCh26 Fluid, Electrolyte, and Acid-Base Balance | 5/1 |
| 15 | 5/1 | Ch 27: Reproductive System Ch 28: Pregnancy and Human Development | FtF, Cat/Rabbit Dissection (pre-opened) LabCh27: Exercises 27-1: Male Reproductive Anatomy, 27-2: Female Reproductive Anatomy LabCh28 | 5/8 |
| 16 | 5/8 | 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 is March 3rd for the 1st 8-week session, April 26 for the 16-week session, and May 5th for the 2nd 8-week session.

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. Students are required to watch a training [video](#), complete the [self-screening](#), and acknowledge the safety guidance at: www.com.edu/selfscreen. In addition, students, faculty, and staff must perform a [self-screening](#) prior to each campus visit. Finally, students, faculty, or staff who have had symptoms of COVID-19, received a positive test for COVID-19, or have had close contact with an individual infected with COVID-19 must complete the [self-report tool](#).