BIOL2402.104CL
Anatomy and Physiology II
Spring 2023
Tuesday and Thursday: 1:30 pm – 4:20 pm in STEAM Building#22 Room 340

Instructor Information: Dr. Jennifer Bieszke, jbieszke@com.edu (preferred) 409-933-8332

Student hours and location:
Monday and Wednesday: (2:00 pm-3:00 pm) STEAM Building 325.28
Monday: 5:00 pm- 7:00 pm Virtual Office Hours (use provided link in Brightspace)
Wednesday: 5:00 pm – 6:30 pm STEAM Building 325.28*
Tuesday and Thursday: 5-6 pm STEAM Building 325.28*

- For evening office hours: You will need to call my office phone number to receive entrance into my office during these hours.

Important! Appointments upon request
Course Communication: Email preferred method of communication with me. Responses canbe expected 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 listed above were purchased at the time of registration and you will gain access to these in Blackboard when classes begin. These items are required and you cannot choose an option to discontinue their use.**

(Lab Manual) Amerman, E., 2022. Exploring Anatomy & Physiology in the Laboratory, 4th edition. Englewood, Colorado, Morton Publishing Company (customized for College of the Mainland) ISBN-13: 9781640436206

(Scantrons & #2 pencil) You will need four 882-E scantrons for taking lecture exams in this course. They are sold individually in the COM bookstore. You will also need a #2 lead pencil for using the scantrons when taking the course examinations.

(COM D2L Brightspace) COM D2L Brightspace will be used for online activities, quizzes, and more. Inaddition, D2L Brightspace will allow students to communicate with each other and the instructor. Many class resources will be available through D2L Brightspace. Training is not required to access D2L Brightspace; however, the "Online Learner Workshop on Demand" for acquiring D2L Brightspace skillsis available for self-enrollment. The self-enrollment link is located on the "Login page". If you have any questions regarding course access or training, please submit a D2L Brightspace Support Ticket to the EdTech Services department.

You are responsible for maintaining your own online access to the course. If your computer does not allow you to complete the assignments in the course, please use the computers available on campus. Be aware that the college computers are only available during the hours of operation for the computer labs and library. It is up to you to be aware of those times and get all assignments turned in on time.

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:

Lecture Grade (700 points)

Lecture Exams & Final Exam (440 points)

All Exams will be taken during class and will consist of the following format. Short-answer, essay, matching, multiple choice, T/F and diagram identification. Scantron and #2 pencil will be required for the exam. Exams will be taken in the first part of class only so it is important that you arrive on time and work efficiently on the exam. In order to prepare you for the Final Exam which will have a cumulative part of the exam, each successive test in the course will contain material from the previous test to help with retention of material.

Quizzes (80 points)

You will have four quizzes that are found in D2L Brightspace in the Quizzes tab in the navigation bar or the links are embedded in the corresponding unit. Each quiz consists of short-answer, multiple-choice, and a matching section. You will have 30 minutes to answer these questions. These quizzes emulate the upcoming tests, so it is important to do well by properly preparing yourself for the quiz. Doing well on the quiz indicates a good understanding of the material so there will be two opportunities for taking the quiz. Keep in mind that the second attempt may have some different questions and so your grade will be based on the average of the two quizzes. If you experience technical difficulty, please contact me. If I can verify the technical difficulty, I can reset quiz if the due date has not passed. I advise you to try and take the quiz earlier in the week vs. the last hour on the Due date! Quiz due dates are listed in the schedule.

Lecture Assignments (80 points)

These assignments are found in the Mastering A&P unit in D2L Brightspace, where you will have to enter the Mastering Course Home link to see the list of Mastering A&P assignments. These assignments are designed specifically to help you learn and think critically about the lecture material.

Multiple Posts in Discussion Forums (40 points)

You will have four discussion forums where you are going to have to make an initial post to the discussion forum in D2L Brightspace. Discussions are also found in the lower-level navigation course bar or links embedded in the appropriate learning module. This post will have specific criteria that you must meet when making your post. You will also have to make a second post to another student's post to extend the discussion further in a **positive** manner. It is important to recognize if the wrong information is being posted, but please be respectful of others when notifying a person of misinforming information.

Disease Group Project (40 points)
After the second exam, we will complete an activity on heredity. This will help introduce you to the genetic part of this project. Groups will be assigned in class, and you will use this time after the examination to make plans with your group in preparing the group project. There will be a written and oral part to this project which will be presented in class during Week 15. Please refer to the Disease Project unit when it becomes available in D2L Brightspace.

Laboratory Grade (300 points)-
Important! Students must achieve **at least 70% of the points** offered in the following assignments in order to receive a passing grade and attendance is required. Refer to the **Lab Science and Attendance Policies** below.

Laboratory Safety Quiz (10 points)
You will have one laboratory safety quiz. This quiz is over laboratory safety. You will learn about laboratory safety in our first in-class laboratory meeting and will have a quiz during the second class meeting. Please see the DUE date in Schedule that follows**.**

Laboratory Assignments (130 points)
These assignments will be based on the Exercises that come from your lab manual or handouts posted in Blackboard. Make sure to bring these exercises and handouts to class as they will be the basis for an in-class assignment which will be completed within your lab group!

Lab Practicals (160 points)
There will be 2 laboratory practicals. The practicals consist of in-class Power Point examinations. The practicals are timed so if a student comes late to this examination, he/she risks not being able to complete or even take this test.

Grade Feedback
All Assignments/Quizzes and Exams will be graded with grades posted in D2L Brightspace within one week of the due date**. If you question a grade, this must be discussed within one week of the posting of the grade.** Grades cannot be disputed on individual course requirements after this point.

Determination of Course Grade/Detailed Grading Formula:

Course Assessment	**Total Points**	**Percentage of Course**
LECTURE PORTION	**700**	**70.0%**
Lecture Exams (3)	300 (100 points each)	30.0 %
On-line Quizzes (4)	80 (20 points each)	8.0 %
Lecture Assignments (8)	100 (12.5 points each)	10.0 %
Discussion Forums (4)	40 (10 points each)	4.0 %
Disease Group Project	40	4.0 %
Final Exam	140	14.0 %
LABORATORY PORTION	**300**	**30.0%**
Lab Safety Quiz (1)	10	1.0%
Lab Assignments (13)	130 (10 points each)	13.0%
Lab Practicals (2)	160 (80 points each)	16.0%
TOTAL POINTS	**1000**	**100%**

Grading Scale (based on points not percentage-please remember this!):
A A Sum of the points earned for course assessments that equals between 900 and 1000 points
B A Sum of the points earned for course assessments that equals between 800 and 899 points
C A Sum of the points earned for course assessments that equals between 700 and 799 points

D A Sum of the points earned for course assessments that equals between 600 and 699 points
F A Sum of the points earned for course assessments that equals below 600 points.
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.

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.

Make-Up Policy:

LECTURE EXAMS: Make-ups will only be allowed at the discretion of the instructor and/or the presentation of documented excuses that is approved by me for the reason for which a student will miss the class date.

QUIZZES: All quizzes are taken on-line so only if there is proof of extenuating circumstances that prevent the taking of the quiz over the period of time that the quiz is available will the percentage of the upcoming lecture exam will be used to calculate the quiz grade.

DISCUSSION FORUMS & LECTURE ASSIGNMENTS: No make-up opportunity will be allowed for these assignments unless there is a documented extenuating circumstance such as illness or death in family.

DISEASE GROUP PROJECT: Each part of the course project must be completed or delivered by the due dates. There is no extension of the due dates unless you have a documented excuse approved by me.

LAB ASSIGNMENTS: If you have a documented excuse approved by me, the percentage earned from the upcoming lab practical grade will be used to calculate assignment score.

LAB PRACTICALS: Make-ups will only be allowed at the discretion of the instructor and/or the presentation of documented excuses that is approved by me for the reason for which a student will miss the class date.

Attendance Policy:

Students are expected to attend all class sessions as listed on the course calendar. These attendance policies apply to the face-to-face lab portion of the class.

- **Attendance is important for completing the lab assignments** – please refer to the make-up policy for lab assignments. If you miss, it is your responsibility to catch-up on the material. I can help you.
- **Tardiness Policy:** Students arriving late (five minutes) will be noted in the daily attendance.
- **Withdrawal Policy:** If you are unable to successfully complete the course requirements, you may wish to drop this class. It is **your responsibility** to initiate a request for withdrawal from any course. It is in your best interest to visit with me before making that decision. However, if you decide to drop this class, it is **your responsibility** to withdraw by **April 24th, 2023.** You are still enrolled in this course until you have submitted this form. If you do not withdraw by this date, you will receive a grade of "0" (zero) for all remaining work that you did not complete, which may result in a grade of **"F"** for the class.

Please if you are having trouble in the course especially early on, contact me so that we can get you the help that you need to avoid a withdrawal from the course.

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 Brightspace or other LMS)

(Additional Policy regarding Course Communication) If you need to contact me, please use my email for reasons of tardiness as well as questions and concerns. Also, please sign the email with your name and identify your course number and section when contacting me. If you are having difficulty with the course material, come to office hours or please contact me via phone or email to make an appointment.

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.		Lab Practical 1 and 2
2. Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.		Lecture Assignment 8
3. Describe the interdependency and interactions of the systems.		Disease Group Project
4. Explain contributions of organs and systems to the maintenance of homeostasis.	**Critical Thinking**	**Urinalysis Handout**
5. Identify causes and effects of homeostatic imbalances.	**Communication Skills**	**Urinalysis Handout**
6. Describe modern technology and tools used to study A&P		Lab Practical 2
7. Apply appropriate safety and ethical standards.		Lab Safety Quiz
8. Locate and identify anatomical structures.		Lab Practical 2
9. Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations.		Lab Practical 1
10. Work collaboratively to perform experiments.	**Teamwork**	**Urinalysis Handout**
11. Demonstrate the steps involved in the scientific method.		Exercise 26-1 The Model Kidney
12. Communicate results of scientific investigations, analyze data and formulate conclusions.		Exercise 20-2 Blood Typing & Exercise 20-3 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 Handout**

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 maximum penalty imposed for violations will be an F in the course. The student will also be referred to the Dean of Students 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 Sheena Abernathy, Chair of the Science Department, at 409-933-8330 or by email: sabernathy@com.edu.

Course outline: (Tentative Schedule)
Refer to Weekly Announcements in Brightspace for updated information!

WEEK	**LECTURE MATERIAL**	**LABORATORY ACTIVITIES**
1- **Jan. 17- 21**	MARTIN LUTHER KING JR. DAY (1/16) Chapter 16 Endocrine System **-Complete Intro Discussion Forum** **Lecture Assignment 1 DUE 1/24/23**	Lab Safety Quiz DUE 1/19/23 LAB1 DUE 1/19/23: Exercise 16-1 and 16-2 Endocrine Organ Anatomy and Histology

2- **Jan. 22- 28**	Chapter 18- The Heart	LAB2 DUE 1/26/23: Ex. 17-1 Anatomy of the Heart Ex. 17-2 Cardiac Muscle Histology
3- **Jan. 29 – Feb. 04**	Chapter 19-Blood Vessels **Lecture Assignment 2 DUE 2/04/23** **Discussion Forum 1-Post 1 DUE 2/02/23** **Discussion Forum 1-Post 2 DUE 2/04/23**	LAB3 DUE 2/02/23: Exercise 19-5 ECG & Vernier EKG Handout Exercise 19-1 (Auscultation) Exercise 18-1 & 18-2 Major Arteries & Veins
4- **Feb. 05-11**	Chapter 19-Blood Vessels **QUIZ 1 – (Online) DUE 2/06/23** **EXAM 1 – (In-class) DUE 2/09/23**	LAB4 DUE 2/09/23 after Exam 1: Exercise 18-5 Clinical Applications Exercise 19-3 ANS (Blood pressure)
5- **Feb. 12- 18**	Chapter 17- The Blood **Lecture Assignment 3 DUE 2/18/23**	LAB5 DUE 2/16/23: Exercise 20-1 Formed Elements of Blood Exercise 20-2 ABO & Rh Blood Groups
6- **Feb. 19-25**	Chapter 21 Immunity & Chapter 20 Lymphatics **Lecture Assignment 4 DUE 2/25/23** **Discussion Forum 2-Post 1 DUE 2/23/23** **Discussion Forum 2-Post 2 DUE 2/25/23**	LAB6 DUE 2/23/23: Exercise 20-3 Murder Mystery Game Exercise 21-1 Lymphatic System Anatomy Exercise 21-2 Lymphatic Organ Histology
7- **Feb. 26- Mar. 04**	Chapter 22- The Respiratory System **QUIZ 2 – (On-line) DUE 2/27/23** **EXAM2 DUE 3/02/23**	Exercise 28-3 Heredity DUE 3/02/23 Assignment of Disease Group Projects
8- **Mar. 05-11**	Chapter 22- The Respiratory System **Lecture Assignment 5 DUE 3/11/23**	**LAB PRACTICAL 1 DUE 3/09/23** LAB7 DUE 3/09/23: Exercise 22-1 Respiratory Anatomy Exercise 23-2 Measuring Pulmonary Volumes Exercise 23-3 pH and Ventilation Construct a Lung Handout
SPRING BREAK (3/12-3/18)		
9- **Mar. 19-25**	Chapter 23- The Digestive System **Lecture Assignment 6 DUE 3/25/23**	LAB8 DUE 3/23/23: Exercise 24-1 Digestive System Anatomy Lactase Enzyme Assay Handout
10- **Mar. 26- Apr. 01**	Chapter 23- The Digestive System Chapter 24 – Nutrition Chapter 25- Urinary System **BONUS Nutrition Activity DUE 4/01/23** **Discussion Forum 3-Post 1 DUE 3/30/23** **Discussion Forum 3-Post 2 DUE 4/01/23**	LAB 9 DUE 3/30/23: Exercise 25-1 Urinary System Anatomy Kidney Dissection
11- **Apr. 02- 08**	**SPRING HOLIDAT (7-9)** **QUIZ 3 – (Online) DUE 4/03/23** **EXAM 3 - (In-class) DUE 4/06/23** Chapter 25 – The Urinary System	LAB 10 DUE 4/06/23 after Exam 3: Exercise 26-1 The Model Kidney Urinalysis Handout
12- **Apr. 09-15**	Chapter 25- The Urinary System Chapter 26- Fluid Balance **Disease Project Outline DUE 4/13/23** **Lecture Assignment 7 DUE 4/15/23**	LAB 11 DUE 4/13/23: Exercise 27-1 and 27-2 Male and Female Reproductive Anatomy Pregnancy Kit/Barrier Lab Handout
13- **Apr. 16-22**	Chapter 26- Fluid Balance Chapter 27- Reproductive System **Discussion Forum 4-Post 1 DUE 4/20/23** **Discussion Forum 4-Post 2 DUE 4/22/23**	LAB 12 DUE 4/20/23: Pig Dissection
14- **Apr. 23-29**	Chapter 28- Development **Lecture Assignment 8 DUE 4/29/23**	LAB 13 DUE 4/27/23 Exercise 28-1 Fertilization and Implantation Exercise 28-2 Embryogenesis, Fetal Development and Fetal Cardiovascular Anatomy
15- **Apr. 30-May 06**	**Project Presentation Slides DUE 5/01/23** **BONUS Disease Project Evaluations DUE 5/02/23** **PROJECT PRESENTATIONS DUE 5/02/23**	**Lab Practical 2 DUE 5/04/23**
16- **May. 07-12**	**QUIZ 4– (Online) DUE 5/08/23** **FINAL EXAM DUE 5/09/23**	

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 Student_Handbook_2022-2023_v4.pdf (com.edu). 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 at 409-933-8919 or klachney@com.edu. The Office of Services for Students with Disabilities is located in the 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 March 1. The last date to withdraw from the 16-week session is April 24. The last date to withdraw for the 2nd 8-week session is May 3.

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.