BIOL2401.101CL
Anatomy and Physiology I
Summer 2022
Monday through Friday 08:00AM - 11:40AM
Steam Bldg. #22, Room 339

Instructor Information: Professor Smith
email: ssmith10@com.edu; office number: 409-933-8436

Student hours and location: Virtually by appointment, In-person Friday's @ 11:40am Office:325-23

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 BB = NO PURCHASE REQUIRED**)
- Amerman, E., 2017. Exploring Anatomy & Physiology in the Laboratory, 3rd edition. Englewood, Colorado, Morton Publishing Company (customized for COM) ISBN-13: 978-1-61731-955-6 (**Lab Manual)**

Course Description: Anatomy and Physiology I is the first part of a two-course sequence. It is a study of the structure and function of the human body, including cells, tissues, and organs of the following systems: integumentary, skeletal, muscular, nervous, and special senses. 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 integumentary, skeletal, muscular, nervous, and special senses. **Prerequisite: TSI Reading 351 or IRW 0320 with a grade of "C" or better. BIOL 1408 with a grade "C" or better is strongly recommended as a prerequisite but is not required.**

Course requirements:

Lecture Exams **&** ***Comprehensive Final Exam***

There are 4 exams and 1 comprehensive final exam (CFE). Each lecture exam consists of multiple-choice, fill-in-the-blank, matching, true-false, essay, and identification. Exam dates are listed in the syllabus documents.

Lecture Quizzes

There are 4 lecture quizzes throughout the course. You will have a set time limit to answer the questions. Lecture quizzes will be assigned the Friday prior to an exam. Lecture quiz due dates are listed in the syllabus document.

Mastering A&P Assignments

You will have 5 online assignments in the Modified-Mastering A&P. Due dates are listed in the syllabus document. **Required online component**, you will access via BB from day one.

Lab Activity and Lab Activity Quizzes (LAQ) via BlackBoard

There are 12 optional online lab activities. Each activity reinforces the material that will appear on the 2 scheduled Lab Praticals. You must watch all videos uploaded to the Lab Material area to answer the lab activity quizzes. You must log into BB to complete the quizzes but are not required to use Respondus. Lab quizzes will be each one bonus point towards your lab practicals.

Lab Practicals

There will be 2 lab practicals during this course. Practical dates are listed in the syllabus document.

Professionalism

All email and in-person communication need to remain respectful. I am open to concerns, comments, and constructive criticism. However, please make sure all comments are respectful. Professionalism is 2% of your grade, **please be sure to identify you name and class when emailing with a clear explanation of the purpose of your email.** This includes following dress code in lab, clear concise email with name and course number, last minute technical problems because of procrastination, not prepared for lab.

Weekly Discussions via BlackBoard

There will be 5 weekly discussions. These are **not** a required component of the course but are the only way to earn extra credit points towards your overall final grade. Each post will be worth 2 extra credit point added to your overall final course grade.

Bonus Points

Bonus points are **not** part of the course requirements but are opportunities to earn extra points will be offered throughout the semester.

Determination of Course Grade/Detailed Grading Formula:

Course Assessment	**Total Points**	**Percentage of Course**
LECTURE PORTION	**700**	**70.0%**
Syllabus Quiz	5 points	0.5%
Read Me First Quiz	5 points	0.5%
Professionalism	20 Points	2.0%
Mastering A&P Assignments (5)	200 (40 pts each)	40.0 %
Lecture Quizzes (4)	80 (20 pts each)	8.0 %
Lecture Exams (4)	340 (85 pts each)	34.0 %
Comprehensive Final Exam	50 points	5.0%
LAB PORTION	**300**	**30.0%**
Lab Safety Quiz	10 points	1.0%
LAQ (12)	120 points (10 pts)	12.0%
Online Lab Practicals (2)	170 (85 pts)	17.0%
TOTAL POINTS	**1000**	**100%**

Grading Scale:

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.

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: Exams are administered in class. Make-ups are allowed at the discretion of the instructor. A note from a doctor or employer may be required.

LAB PRACTICALS: Administered via in class. Make-ups are allowed at the discretion of the instructor. A note from a doctor or employer may be required.

MISSED ASSIGNMENTS: Please contact the instructor if you missed an assignment to make arrangement to compete the missed assignment. This is at the instructor discretion.

Attendance Policy: Students are 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).

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 Essay Questions
3. Describe the interdependency and interactions of the systems.		Skeletal System Case Study
4. Explain contributions of organs and systems to the maintenance of homeostasis.	**CT**	**Skeletal System Case Stud**
5. Identify causes and effects of homeostatic imbalances.		Case Study Activity
6. Describe modern technology and tools used to study anatomy and physiology.		Muscle Fatigue lab
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**	**pH Lab**
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**

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)

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 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:

Course Schedule Outline (SUBJECT TO CHANGE IF NEEDED)

WK	DAYS	LECTURE	LAB On-Campus	LAB Content/ Online - LAQ
1	6/06 to 6/12	CH1: Intro to A&P CH2: Chemistry CH3: The Cell **Assignment 1 (CH 1, 2, 3)** **Read Me First Quiz** **Syllabus Quiz** **Lecture Quiz 1**	**DAY 1&2** Lab Safety Exercises 1-1 through 1-5 Body Regions and Positioning Ex. 2-1 pH, Acids and Bases Conductivity **DAY 3&4** Ex. 4-1 Cell Ex. 4-2 Diffusion (Beaker Demo only) Dialysis Handout Ex. 4-4 Mitosis and The Cell Cycle	Ex.1-4 Body Cavities & Membranes Ex. 1-5 Planes of Section (LAQ 1) Ex. 2-1 pH, Acids and Bases Conductivity (LAQ 2) Ex. 4-2 Diffusion Ex. 4-3 - Ex. 4-4 Mitosis and The Cell Cycle (LAQ 3)
2	6/13 to 6/19	**Exam 1 -06/13** CH4: Tissues CH5: Integumentary System CH6: The Bones CH7: Skeletal System **Assignment 2 (CH 4, 5, 6, 7)** **Lecture Quiz 2**	**DAY 1&2** Ex. 5-1 through Ex. 5-4 Ex. 6-1 Skin Anatomy & Accessory Structures Ex. 6-2 Histology of Integument Ex. 6-4 Fingerprinting **DAY 3&4** Ex. 7-1 Histology of Osseous Tissue Ex. 7-3 Bone Markings & Shapes Ex. 7-4 Anatomy of long bones Ex. 8-1 The Skull Ex. 8-2 Axial Skeleton Ex. 8-3 Appendicular Skeleton	Ex. 5-1 through Ex. 5-4 (LAQ 4) Ex. 6-1 Skin Anatomy & Accessory Structures Ex. 6-2 Histology of Integument Ex. 6-4 Fingerprinting (LAQ 5) Ex. 8-1 The Skull Ex. 8-2 Axial Skeleton Ex. 8-3 Appendicular Skeleton (LAQ 6)
3	6/20 to 6/26	**Exam 2 – 06/20** CH8: The Joints CH9: The Muscles CH10: The Muscular System CH11: Nerve Tissue **Assignment 3 (CH 8, 9, 10, 11)** **Lecture Quiz 3**	**DAY 1&2** **Lab Practical 1** Ex. 9-1 Classification of Joints Ex. 9-3 Knee Joint Ex. 9-5 Motion of Joints **DAY 3 &4** Ex. 10-1 Skeletal Muscle Ex. 12-1 Neurons	Ex. 9-3 Knee Joint (LAQ 7) Ex. 10-1 Skeletal Muscle Ex. 11-1 Microscopic Skeletal Muscle (LAQ 8) Ex. 12-1 Neurons (LAQ 9)
4	6/27 to 7/03	**Exam 3 – 06/27** CH12: The Central Nervous System CH13: The Peripheral Nervous CH14: The Autonomic Nervous CH15: Ears & Eyes Only **Assignment 4 (CH 12, 13, 14 &15)** **Lecture Quiz 4**	**DAY 1&2** Ex. 13-1 Anatomy of the Brain Brain Dissection Ex. 14-2 The Cranial Nerves Ex. 14-3 Spinal Nerves & Reflexes **DAY 3&4** Ex. 15-1 Anatomy of Eye & Vision Ex. 15-2 Anatomy of Ear, Hearing & Equilibrium Eye Dissection	Ex. 13-1 Anatomy of the Brain (LAQ 10) Ex. 14-2 The Cranial Nerves Ex. 14-3 Spinal Nerves & Reflexes (LAQ 11) Ex. 15-1 Anatomy of Eye & Vision Ex. 15-2 Anatomy of Ear, Hearing & Equilibrium (LAQ 12)
5	7/04 to 7/08	**July 4th – Holiday** **Exam 4 – 07/05** **Comprehensive Final 07/07**	**Lab Practical 2 07/06**	

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 5-week summer session is July 1. The last date to withdraw from the 10-week summer session is August 1. The last date to withdraw for the 2nd 5-week summer session is August 5.

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 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.

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.