



BIOL 2402.102CL
Anatomy & Physiology II
Spring 2024
M/W 11:00AM – 1:50PM
STEAM BLDG #22, ROOM #334

Instructor Information: Professor Smith, email: ssmith10@com.edu, phone: 409-933-8436

Student hours and location: On-campus in STE325-22: M 2:00-6:00pm; Virtual hours by appointment <https://calendly.com/ssmith10/30min>: T 5:00-6:00pm, TH 5:00-6:00pm & F 9:00-11:00am

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 Manual)
- Scantron 888-E (5 scantrons)

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 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 online and assigned the last class prior to the exam day. Lecture quiz due dates are listed in the syllabus document.

Chapter Quizzes:

You will have 15 online chapter quizzes each week. Due dates are listed in the syllabus document you will access via D2L from day one.

Lab Activity and Lab Activity Quizzes (LAQ) via BlackBoard

There are 12 online lab activities via BB (Respondus not required). Each activity reinforces the material that will appear on the 2 scheduled Lab Practicals. You must watch all videos uploaded to the Lab Material area to answer the lab activity quizzes. You must be in appropriate lab attire to participate in the in-person lab activities.

Lab Practicals

There will be 2 lab practicals during this course. These will be taken in class and the 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 when speaking to me or fellow classmates. Professionalism is 1.0% 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 a clear concise email with name and course number, last minute technical problems because of procrastination, not prepared for lab. Please see the professionalism document for further details. All email's must be sent from your COM email. Emails from personal email addresses will NOT be opened.

Bonus Points: Bonus points are not part of the course requirements; they are given at the discretion of the instructor. There will be multiple opportunities to earn extra points throughout the semester. All bonus points will be part of an exam or practical.

Determination of Course Grade/Detailed Grading Formula:

Course Assessment	Total Points	Percentage of Course
LECTURE PORTION	700	70.0%
Online Syllabus Quiz	5 points	0.5%
Professionalism/Discussion	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%
LAB PORTION	300	30.0%
Lab Safety Quiz	10 points	1.0%
Lab Activities (12)	120 points	12.0%
Lab Practicals (2)	170 (85 pts each)	17.0%
TOTAL POINTS	1000	100%

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 may 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.

Lab Practicals’: Make-up Lab Practicals’ are permitted at the discretion of the instructor. Documentation may 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.

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.

Attendance Policy: This class requires students to come to the lab to complete laboratory exercises that are a required part of this course. Absences in three 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, subject to instructors' discretion).

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)

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.		Exams 1-4
2. Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.		Comprehensive Final Exam
3. Describe the interdependency and interactions of the systems.		Exam 1
4. Explain contributions of organs and systems to the maintenance of homeostasis.	CT	Exams 1-3
5. Identify causes and effects of homeostatic imbalances.	CS	Exams 1-4
6. Describe modern technology and tools used to study A&P		Lab Practical 1
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 2
10. Work collaboratively to perform experiments.	TW	ABO Murder Mystery
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

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

Course outline: (This schedule is tentative)

Week #	Lecture: Online	Laboratory: In-Person	Due Sunday: Online
1. Jan. 15 – Jan. 21	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 LAQ 1
2. Jan. 22 - Jan. 28	CH18: The Heart	Ex. 17-1 (Anatomy of the Heart) Ex. 17-2 Cardiac Muscle Histology	Chapter 18 Quiz LAQ 1
3. Jan. 29 - Feb. 04	CH19: Blood Vessels	Ex. 19-1 (Heart Auscultation) Ex. 19-5 (ECG) Vernier EKG Handout	Chapter 19 Quiz Lecture Quiz 1 LAQ 3
4. Feb. 05 - Feb 11	Exam 1 – (Ch. 16,18,19) CH17: The Blood	Ex. 18-1 (Major Arteries of Body) Ex. 18-2 (Major Veins of Body) Ex. 18-3 (Time to Trace!) Ex. 18-5 (Clinical Applications) Ex. 19-3 (Blood Pressure)	Chapter 17 Quiz LAQ 4
5. Feb. 12 - Feb 18	CH20: Lymphatic System	Ex. 20-1 (Blood Composition) Ex. 20-2 (ABO & Rh Blood Groups) Ex. 20-4 (Blood Donation)	Chapter 20 Quiz LAQ 5
6. Feb. 19 – Feb. 25	CH21: Immunity	Ex. 20-3 (Murder Mystery Game) Ex. 21-1 (Lymphatic System Anatomy) Ex. 21-2 (Lymphatic Organ Histology) Ex. 21-3 (The Immune Response)	Chapter 21 Quiz Lecture Quiz 2 LAQ 6
7. Feb. 26 - Mar. 03	CH22: Respiratory System	Lab Practical 1	Chapter 22 Quiz Lecture Quiz 2 LAQ 7
8. Mar. 04 - Mar. 10	Exam 2 – (Ch. 17,20,21,22) CH23: Digestive System	Ex. 22-1 (Respiratory Anatomy) Ex. 23-2 (Pulmonary Volumes & Capacities) Ex. 23-3 (pH and Ventilation) Construct a Lung Handout	Chapter 23 Quiz
03/11-03/17	SPRING BREAK	SPRING BREAK	SPRING BRK
9. Mar. 18 - Mar. 24	CH24: Nutrition	Ex.24-1 (Digestive System Anatomy) Lactase Enzyme Activity Lab Ex. 24-4 (Time to Trace!)	Chapter 24 Quiz LAQ 8
10. Mar. 25 - Mar. 31	CH25: The Urinary System	Ex. 25-1 (Urinary System Anatomy)	Chapter 25 Quiz
11. Apr. 01 - Apr. 07	CH26: Fluid Balance	Ex. 26-1 The Model Kidney Ex. 26-3 Time to Trace! Urinalysis Handout	Chapter 26 Quiz Lecture Quiz 3 LAQ 9
12. Apr. 08 - Apr. 14	Exam 3 – (Ch. 23,24,25,26) CH27: Reproductive System	Ex. 27-1 (Male Reproductive Anatomy) Ex. 27-2 (Female Reproductive Anatomy)	Chapter 27 Quiz LAQ 10
13. Apr. 15 - Apr. 21	CH28: Development	PIG DISSECTION	Chapter 28 Quiz LAQ 11
14. Apr. 22 - Apr. 28	Withdraw Day (4/22) CH29: Heredity	Ex. 28-1 Fertilization and Implantation Ex.28-2 Embryogenesis, Ex. 28-3 Heredity PIG UTERUS DISSECTION (OPTIONAL)	Chapter 29 Quiz Lecture Quiz 4 LAQ 12
15. Apr. 29 - May 05	Exam 4 – (Ch. 27,28,29) Final Exam Review	Lab Practical 2	N/A
16. May 06 – May 10	Comprehensive Final Exam		N/A

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/docs/Student_Handbook_2023-2024_v2.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.*

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 February 28. The last date to withdraw from the 16-week session is April 22. The last date to withdraw for the 2nd 8-week session is May 1. The last date to withdraw for spring mini session is May 29.

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.