

Human Anatomy and Physiology II

BIO 254.I50

Spring 2021



Number of Credits: 4

Meeting Times: TBD (by class survey) posted on class JetNet site

Location/Venue: Online

Instructor: Melody Carmichael

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Online Office Hours: By appointment

Course Description

This is the second course of a 2-semester course sequence in which students study the anatomy and physiology of the human body. The course is a continuation of BIO 253 beginning with the nervous system, following with the endocrine, cardiovascular, respiratory, digestive and urinary systems and finishing with the reproductive system. **This is a difficult course requiring hard work and discipline to be successful. A strong background in biology and/or chemistry is highly recommended.**

Prerequisite = BIO 253

Course Goals and Information

This is a lab science course so should be thought of as two courses. The reading level is difficult. It is not recommended for students who have not had prior college-level science. Chemistry and biology are strongly suggested prior to this course. Students earning a final grade of 3.0 or higher report studying at least 20 hours per week for this one course so please plan accordingly. You are expected to be able to work and learn independently and to be responsible for all assignments and materials. This is a difficult course and will cover a lot of material which will require hard work and discipline. You will need to keep up as the pace of the class is fast, and each class session will be based on new readings plus material from previous days and weeks. There are no quick, easy ways to pass. What you learn will be directly proportional to the amount of effort you have expended.

Class Sessions: This is designed as a fully online course; however, there will be in-person recitation sessions offered through JetNet's "Big Blue Button" for explaining tough topics, practice questions, test previews, and student Q&A. There will be at least 2 sessions per week with the days and times chosen based on a survey of students' schedules. All sessions will be recorded for viewing if you can't attend.

GEO 4 (Scientific Reasoning). The course goals incorporate specific General Education Outcomes (GEOs) established by the JC Board of Trustees, administration, and faculty. These goals are in concert with four-year colleges and universities and reflect input from the professional communities we serve. GEOs guarantee students achieve goals necessary for graduation credit, transferability, and professional skills needed in many certification programs.

Course Objectives

By the end of the semester, students will demonstrate – through both factual lecture exams and laboratory practical identification – their understanding of the following topics (with focus on the human body):

1. Identify the major types of sensory receptors & CNS sensory pathways
2. Differentiate the major motor pathways within the CNS
3. Differentiate the actions of the autonomic nervous system divisions

4. Describe the structures and sensory functions of the nose, taste buds, eye and inner ear
5. Identify source, secretory control, & function of the major hormones produced by the body
6. Identify structures, formation, & functional roles of the elements of blood
7. Describe the structure of the heart, conduction system, cardiac cycle and cardiac output
8. Describe the types of blood vessels, patterns of circulation and mechanisms of vascular exchange
9. Describe blood pressure, hemodynamics, and mechanisms of control
10. Identify the structures and functions of the lymphatic system
11. Identify mechanisms of innate (nonspecific) vs. adaptive (specific) defenses
12. Identify the structures of the respiratory system and their relationship to ventilation
13. Describe mechanisms of gas exchange & transport
14. Identify and structures, functions and mechanisms of the digestive process
15. Describe the basic mechanisms of cellular respiration & anabolism of carbs, lipids, & proteins
16. Identify the major activities in maintenance of energy balance & thermoregulation
17. Identify the major structures and functions of the urinary system components
18. Describe regulation of urine composition and maintenance of fluid balance in the body
19. Describe mechanisms of maintaining acid/base balance and causes & effects of imbalance
20. Identify the structures, functions and gamete formation in the male & female reproductive systems
21. Describe events in conception, pregnancy, basic embryological development and parturition
22. Identify major terms & mechanisms in genetic inheritance
23. Make predictions related to homeostatic imbalance, including disease states & disorders

Textbook

- Anatomy & Physiology: The Unity of Form and Function, 9th Ed., Saladin, McGraw-Hill (Access to the e-text and all online learning materials come with Follett Access. Please see the McGraw-Hill/AAIRS link in the class JetNet site. If you opt out of Follett Access, you can purchase access online or use an alternate text such as www.openstax.com (ok; missing some important information) or another 2-semester A&P text (with 26-29 chapters).
- **Text Book Zero.** This text is available in a digital format. This text is available to rent or purchase in digital format through the JC Bookstore.

Follett Access

- Review the cost of required materials to determine the best option for you to purchase the materials.
- For more information on the Follett ACCESS Program, you can view the view the frequently asked questions.

If after reviewing the costs, you choose to opt out, you may do so here: www.jccmi.edu/optout. Please note your opt out selection is for your entire semester schedule. You cannot opt out or opt in to individual courses. And you must opt out by the due date for your first class: **Opt-out Date is January 14, 2021.**

If you have questions about materials, please contact the Jackson College Follett bookstore at jackson@bkstr.com. For account billing questions, please contact the Jackson College Cashier at jccashier@jccmi.edu.

Exam Process- Respondus

To protect the fairness and integrity of the exams, students will be required to take exams using Respondus Lockdown Browser and Monitor. This is an online test proctoring software that requires a download to your computer. Training and practice with Respondus technology will be provided before the first exam. A Mac or PC with a webcam and microphone is required. If you do not have this, please contact your instructor right away. Students are expected to complete the Respondus Practice quiz on time. This is to give our IT department time

to help troubleshoot issues **before** exam 1 begins. Failure to complete the Respondus quiz on time may result in instructor-initiated drop.

- **No notes or other electronic devices are allowed during exams or practicals.**

Grading Procedure

The grade you earn in this course is based upon total points accumulated: (approximately 850 pts total)

1. Class Exams (5 @ 80 points each)
2. Lab Practicals (3 @ 60 - 80 points each)
3. Lab hand-ins (10 @ 10 points each)
4. Chapter/Terminology Quizzes (10 best; @ 5 points each)
5. Chapter Overviews (5 @ 12 - 15 points each)
6. Learning Activities (5 - 10 points each, for a maximum 50 points)
7. Research Paper (40 points)

Grading Scale

GPA	GRADE RANGE	GPA	GRADE RANGE
4.0	95-100%	1.5	70-74%
3.5	90-94%	1.0	65-69%
3.0	85-89%	0.5	60-64%
2.5	80-84%	0.0	0-59%
2.0	75-79%		

- If you think an error has been made, or disagree with something that has been done, or feel that you have been treated unfairly, you should bring it to my immediate attention so that the problem can be resolved.
- An exam score adjustment MAY be used for each exam. This is a privilege, not a guarantee.
- There will be NO extra credit projects for the course since your time will be better used studying the assigned material.

Academic Honesty Policy

Academic Honesty is defined as ethical behavior that includes student production of their own work and not representing others' work as their own, by cheating or by helping others to do so. Violations of the policy can result in penalties ranging from a 0 on an assignment or test to a 0 in the course.

Plagiarism

Plagiarism is defined as the failure to give credit for the use of material from outside sources. Plagiarism includes but is not limited to:

- Submitting other's work as your own
- Using data, illustrations, pictures, quotations, or paraphrases from other sources without adequate documentation
- Reusing significant, identical or nearly identical portions of one's own prior work without acknowledging that one is doing so or without citing this original work (self-plagiarism)

Cheating

Cheating is defined as obtaining answers/material from an outside source without authorization. Cheating includes, but is not limited to:

- Plagiarizing in any form
- Using notes/books/electronic material without authorization
- Copying
- Submitting others' work as your own or submitting your work for others

- Altering graded work
- Falsifying data
- Exhibiting other behaviors generally considered unethical
- Allowing your work to be submitted by others

Accessibility

Jackson College understands that cultivating a broadly diverse community is crucial to our educational mission and to our foundational commitment to leadership and service. Jackson College is fully committed to ensuring our courses are accessible to everyone including those with disabilities. We are currently working to increase accessibility and usability of our course materials in order to meet or exceed the requirements of Section 508 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1991 and Web Content Accessibility Guidelines (WCAG) 2.0. For more information about Jackson College's efforts to ensure accessibility please visit the [Jackson College accessibility web page](#). If you have an accessibility need in any of our classes please e-mail the Center for Student Success at JCCSS@jccmi.edu or visit the [Center for Student Success web page](#).

At the Center for Student Success (CSS), we are committed to providing all students the opportunity to achieve academic success by providing a variety of support services free of charge to Jackson College students. This includes, but is not limited to, peer and faculty tutoring, mental health referral, temporary assistance with transportation, various workshops/seminars, and the TRIO program.

In addition, the CSS staff is committed to adapting the College's general services to meet the individual needs of otherwise qualified students with disabilities, for the purpose of providing equal access to all programs and facilities.

Course Management

In extenuating circumstances, a student who is passing the class except for one specific section's exam or lab activities may request an incomplete to have additional time after the end of the semester to make up that one section's material.

Makeup Policy

You are responsible for all assignments, exams, and material covered in the course. The opportunity to make up an exam and/or practical is extended only in the case of emergencies, hospitalization, etc. and require written documentation verifying the cause of the absence. It is your responsibility to contact your instructor for arrangements. Second and subsequent make-up exams will be awarded only 80% of the achieved score. (This does not apply to emergencies.) The instructor reserves the right to award zero or reduced credit for any and/or all late assignments.

Help

Available learning services or opportunities for students seeking help with their course work. May include information about tutors, learning centers, reserved library materials, counseling services.

Academic Advising

It is important to contact a Center for Student Success professional prior to the start of the semester in order to receive accommodations in a timely manner. While we will make every effort to coordinate accommodations in a timely manner, failure to self-identify prior to the start of the semester may delay notification to instructors and timeliness of acquiring accommodations. Accommodations do not automatically carry over to the next semester. Please e-mail JCCSS@jccmi.edu or visit the [Accommodations for Students with Disabilities](#) web page.

Attendance- Participation Policy

For online sections

Just as in a traditional classroom course, regular class participation and keeping up on the reading and assignments is strongly correlated with survival in college. It is my recommendation that you plan to do your assignments and take your exams BEFORE the last day they are due. If problems occur, there is time to fix them before the deadline.

In compliance with Federal Title IV funding requirements, as well as college initiatives, I will be monitoring student participation on a regular basis and officially reporting student activity throughout the term to assure compliance with college policy and federal regulations. It is imperative that you log in to the course and actively participate within the first couple of days of the term to validate your enrollment in the course. After that, not actively participating in class may result in you being withdrawn from the course. Being withdrawn from a course can have an impact on financial aid, billing, athletic eligibility, and housing status. As a college student you are responsible for how your participation impacts your academic progress; the accountability lies with you.

Caveat

Although not expected, some revisions to the class schedule may be necessary due to weather impacts, instructor illness or other unexpected event.

Important Dates:

DATE	EVENT
JUNE 11, 2021	FINAL DATE TO DROP WITHOUT A "W"
JULY 21, 2021	FINAL DATE TO WITHDRAW WITH A "W"
JULY 28, 2021	GRADES DUE

Calendar

<u>Week</u>	<u>Date</u>	<u>Class Topic or Activity</u>	<u>Lab</u>
1	June 7 – 13	Chapter 12-14 Sensory & Motor Pathways Chapter 16 Special Senses	Ex. 1 Sensory Pathways (F 6/11) Ex. 2 Special Senses (T 6/15)
2	June 14 - 20	Chapter 15 Autonomic N.S. Ch. 18 Endocrine System Exam 1 (Ch. 12-16) due by Su. 6/20	Ex. 3 Endocrine System (S 6/27)
3	June 21 – 27	Chapter 19 Blood Chapter 22 Lymphatic System	Lab Practical 1 (due by R 6/24) Ex.4 Blood (S 6/27) Ex. 5 Thoracic Cavity (F 7/2)
4	June 28 – July 4	^Exam 2 (Ch. 18,19,22) due by T 7/1 Chapter 20 & 21 Cardiovascular System	Ex. 6 CV System (F 7/2)
5	July 5- 11	Chapter 23 Respiratory System ^Exam 3 (Ch. 20,21,23) due by F 7/11 Chapter 24 Digestive System	Ex. 7 Respiratory System (F 7/9) Lab Practical 2 (due by T 7/13) Ex. 8 Abdominal Cavity (Sat 7/17)
6	July 12 – 18	Chapter 25 Metabolism Ch. 27 Body Fluids Ch. 26 Urinary System Research paper due by midnight M 7/14 ^Exam 4 (Ch. 24,25,27) due by F 7/18	Ex. 9 Metabolism (S 7/19) Ex. 10 Urinary System (W 7/21)
7	July 19 – 26	Chapter 28 Reproductive System Chapter 29 – Pregnancy & Genetics ^Exam 5 (Ch.26, 28,29) due by M 7/26	Ex. 11 Reproductive System Lab Practical 3 (due by Fri. 7/23)

^Exams & Practicals will be taken online through JetNet – using Respondus lockdown browser – and due no later than midnight the deadline date posted above. All exams and practicals will be available for 3 days (72 hours) before the deadline. (If you need one opened earlier due to a conflict, let me know.)

Labs and other assignments will be uploaded to the appropriate assignment folder in JetNet by the dates indicated in the assignment (listed above for lab hand-ins).