



21 Fall Semester

Human Anatomy & Physiology I BIO 253.I81

Number of Credits: 4

Days Class Meets: Mon/Wed

Meeting Times: 2-3:30

Location/Venue: Hillsdale

Instructor: Dr. Jason Jakubas (Dr. J)

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Online Office Hours: by appointment only

Course Description

This is the first course of a 2-semester course sequence in which students study the anatomy and physiology of the human body. The course includes introductions to basic chemistry, biology, and histology, and extends to the survey of the integumentary, skeletal, muscular and nervous systems. This course includes a laboratory component in which students are responsible for performing dissections and making original observations on dissected material. The laboratory experience culminates with the use of a plastinated human specimen for observation. It is a difficult course requiring hard work and discipline to be successful. A strong background in biology and/or chemistry is highly recommended.

Prerequisite: MAT 040 or higher

Course Goals

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 15 hours per week for this one course so please plan accordingly (and that is for a traditional 15-week semester!).

General Philosophy: You are an adult and a college student. As such 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 day's class will be based on material from the previous days. There are no quick, easy ways to pass. What you learn here will be directly proportional to the amount of effort you have expended. You're also expected to be considerate of the rights of others and not to interfere with those who are trying to study, work and learn.

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" (that will mirror face-to-face recitation sessions) for explaining particularly 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.

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. Anatomical terminology
2. Levels of organization in organisms
3. Homeostasis and feedback loops
4. General chemistry and biochemistry basics
5. Structure and function of biological membranes
6. Cell structure and function
7. Transcription, translation and the cell cycle
8. Structure and function of major body tissues (histology)
9. Structure and function of the skin and related integumentary system structures
10. Formation and homeostasis of the major types of bone
11. Bones and major bony structures of the human skeleton
12. Types, and structures, of articulations and movements performed by each
13. Structure of skeletal muscles and mechanisms of muscle contraction
14. Identification of the movement(s) generated by contraction of specific muscles
15. Interaction between muscles, tendons, ligaments and bones in generating movement
16. Control of action potential generation in neurons
17. Role of neuroglia in nervous system structure and function
18. Structure and function of the divisions and components of the human nervous system
19. Interaction of various brain regions in maintaining life and regulating interaction with the world
20. Development, growth and repair processes in skin, bone, muscle and nervous tissue.

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.

Textbook

Anatomy & Physiology: Unity of Form and Function, 9th Ed., 9781265532697 Saladin, McGraw-Hill.

Access to this **digital text** and all online learning materials comes with BibliU. (See email from bookstore for access code.) If you opt out, you can purchase access online or use an alternate text. [Other A&P textbooks for a full-year class (25-29 chapters) are acceptable (e.g. Tortora, Martini, Marieb, Patton, Seeley, etc.). An [OpenStax A&P text](#) is available online but it is missing some important information from the Nervous System section.]

**The text companion site has a phone/tablet app, options for downloading a copy for reading offline (great if you have shaky internet service), an inexpensive loose-leaf option to buy, and a “SmartBook” feature for guided reading & study. You will not be responsible for all sections in the text, so if you aren’t using the SmartBook feature be sure to follow along carefully with the provided lecture outline. [If you are using a different text, use the lecture outline to know what to study and what to skip.]

Please review the cost of your required materials to determine the best option for you to purchase your materials. Please note, your opt out selection is for your *entire* semester schedule. You cannot opt out/opt into individual courses. And you must opt out by the due date of your first class, which is the 3rd day after the start of your earliest course. [Learn about the new textbook program at JC](#)

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 to use Respondus. If you do not have this technology, please contact your instructor right away. Students are expected to complete the Respondus Practice quiz on time to give our IT department time to help troubleshoot issues **before** attempting exam 1. Failure to complete the Respondus quiz on time may result in instructor-initiated drop.

Grading Procedure

The grade you earn in this course is based upon total points accumulated on the following:

- 1) Concept & Terminology Quizzes (10 best; @ 5pts each) = 50 points total
- 2) Chapter Overview Assignments (per exam) (5 @ 15 pts each) = 75 points total
- 3) "Learning Activities" (5-10 pts. each; your choice from a posted list of possibilities = 50 points total)
- 4) Lab Practicals – free-response, 30-60 minutes timed (25-100 pts. each) = 225 points total
- 5) Class Exams – multiple choice, 1 hour timed (5 @ 80 pts. each) = 400 points total

Grading Scale

Your final grade will be determined based on the percentage of the 800 possible points you have earned.

GPA	GRADE RANGE
4.0	95-100%
3.5	90-94.5%
3.0	85-89.5%
2.5	80-84.5%
2.0	75-79.5%
1.5	70-74.5%
1.0	65-69.5%
0.5	60-64.5%
0.0	0-59.5%

Failure

Any student found cheating or plagiarizing information will receive, at minimum, a score of zero for that exam or assignment and may receive a zero for the course. Respondus video recordings will be used as evidence of improper access/use of material during a test. The Academic Deans will also be informed of the incident.

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.

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

- Material for lab practical study will be presented as a combination of textbook images and images uploaded to JetNet. A list of exactly what will be covered on each practical will be posted in JetNet. Correct spelling is expected; deductions will be made for incorrect spelling (if you can't spell the name at least phonetically correct you don't know the name).
- An exam score adjustment MAY be used for each exam. This is a privilege, not an expectation.
- If you think an error has been made, or disagree with what has been done, or feel that you have been treated unfairly, bring it to my immediate attention so the problem can be resolved.
- There will be **NO extra credit projects** for this course, since it is felt that your time will be better spent studying the assigned materials.

Makeup Policy

You are responsible for all assignments/exams, handouts and materials covered in the course: lecture, recitation and lab. Make-up opportunities for the exams and/or practicals are extended only in the case of emergencies / funerals / hospitalization 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 earned 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

Tutors and other free services for academic success are available at the Center for Student Success (CSS). CSS can also help with writing, study skills, test anxiety, math and reading concerns.

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

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

Please note: The format and timing of this course may need to change due to unforeseen circumstances. In particular: school closings, instructor illness, weather, or other situations that may arise.

If you are taking an in -person or hybrid class, you will be required to complete a Reintegration Video Training course in JetNet prior to being admitted to campus. All COVID safety protocols in place are based on current guidelines and will be enforced while students are on campus.

Important Dates:

MONDAY 09/06/2021	LABOR DAY HOLIDAY-NO CLASSES
WEDNESDAY 11/24- SUNDAY 11/28/2021	THANKSGIVING HOLIDAY-NO CLASSES
SATURDAY 12/18/2021	END OF FALL SEMESTER

Calendar

- All assignment, quiz, exam and practical deadlines are midnight (e.g. 11:59:50pm) the evening of the posted date. The posted dates are subject to change only due to unforeseen circumstances.
- Exams and Lab Practicals will be open for 3 days, so plan accordingly. You will have only 1 chance to complete the assessment
- Overviews and Learning Assignments will be due no later than midnight 2 calendar days prior to the associated exam date. (Some chapters may have earlier deadlines so you can focus on the later chapter material.) The actual due dates will be posted in the JetNet calendar and on the individual quiz or assignment links.

WEEK	DATE (Mon-Sun)	LECTURE TOPIC	LAB ACTIVITY	DUE
1	8/30- 9/5	Ch. 1 Major Themes of Anat. & Phys. Atlas A/12 Orientation to Human Anatomy	Exercise 1: Microscopy	LEARNING CONTRACT 9/5 [5] PRE-TEST 9/5 [5] RESPODUS QUIZ 9/5 [5]
2	9/6 – 9/12	Labor Day Mon. 9/6 – no sessions Ch. 2 Chemistry of Life	Ex. 2: Cell Cycle & Mitosis	CHAPTER 1 TERM QUIZ 9/12 [5] CHAPTER 2 TERM QUIZ 9/12 [5] ANATOMIC TERMINOLOGY QUIZ 9/12 [5]
3	9/13 – 9/19	Finish Ch. 2 Ch. 5 Human Tissues EXAM 1 (Ch. 1, 2) due by Sun. 9/19	Ex. 3: Histology	1 & 2 OVERVIEW QUESTIONS 9/19 [15] LEARNING ACTIVITY 1 9/19 [10] Exam 1 9/17- 9/19 [80]
4	9/20 – 9/26	Finish Ch. 5 Ch. 3 Cellular Form & Function	Histology	HISTOLOGY TERM QUIZ 9/26 [5]
5	9/27 – 10/3	Ch. 3 continued	PRACTICAL 1 due by Sun. 10/3	PRACTICAL 1 10/3 [25]
6	10/4 – 10/10	Ch. 4 Genes & Cellular Function	Ex. 4: Skull study & Ch. 8	CELL BIOLOGY TERM QUIZ 10/10 [5]
7	10/11 – 10/17	Ch. 6 Integumentary System EXAM 2 (Ch. 3-5) due by Sun. 10/17	Ex. 4: Axial Skeleton	3-5 OVERVIEW QUESTIONS 10/17 [10] LEARNING ACTIVITY 2 10/17 [10] EXAM 2 10/17 [80]
8	10/18 – 10/24	Ch. 7 Bone Tissue	Ex. 4: Appendicular Skeleton	CHAPTER 6 TERM QUIZ 10/24 [5] CHAPTER 7 TERM QUIZ 10/24 [5]
9	10/25 – 10/31	Ch. 9 Articulations EXAM 3 (Ch. 6-8) due by Sun. 10/31	Skeletal System	6-8 OVERVIEW QUESTIONS 10/31 [10] LEARNING ACTIVITY 3 10/31 [10] EXAM 3 10/31 [80]
10	11/1 – 11/7	Ch. 11 & 10 Muscle Structure Ch. 10 Muscle Tissue	LAB PRACTICAL 2 due by Sun 11/7	PRACTICAL 2 11/7 [100]
11	11/8 – 11/14	Ch. 10 continued	Ex. 5: Muscles	CHAPTER 10 TERM QUIZ 11/14 [5] CHAPTER 11 TERM QUIZ 11/14 [5] CHAPTER 11 TERM QUIZ 11/14 [5]
12	11/15 – 11/21	Ch. 12 Nervous System EXAM 4 (Ch. 9-11) due by Sun. 11/21	Muscles	9-11 OVERVIEW QUESTIONS 11/21 [15] LEARNING ACTIVITY 4 11/21 [10] EXAM 4 11/21 [80]
13	11/22 – 11/28	Ch. 12 continued Thanksgiving – No Wed-Fri sessions	Muscles & Ex. 6: Nervous System	CHAPTER 12 TERM QUIZ 11/28 [5] CHAPTER 12 TERM QUIZ 11/28 [5]

14	11/29 – 12/5	Ch. 13 The Spinal Cord	Muscles & Nervous System	CHAPTER 13 TERM QUIZ 12/5 [5] CHAPTER 14 TERM QUIZ 12/5 [5]
15	12/6 – 12/12	Ch. 14 The Brain & Cranial Nerves	PRACTICAL 3 due by Sun. 12/12	PRACTICAL 3 12/12 [100]
16	12/13 – 12/18	Finish Ch. 14 EXAM 5 (Ch. 12-14) & Post-test due by Sat. 12/18		12-14 OVERVIEW QUESTIONS 12/18 [15] LEARNING ACTIVITY 5 12/18 [10] EXAM 5 10/17 [80]