

BIO 235 Human Anatomy and Physiology

Instructor: Dr. Ian N. Cost
Office: Science 239
Office Phone: 610.921.7728
Email: icost@albright.edu
Class: MWF 8:00 – 9:45

Labs Tuesday 9-12
Thursday 9-12
Office Hours: Monday 1-2
Thursday 1-2
or by appointment

This course will consist of two hours of class each day we meet. A break from 8:55 to 9:00 will be standard practice.

Course Objectives: This course is designed to fill two semesters of learning human anatomy and physiology. The main objective of the second semester of this class is to understand the basic physiological processes of the human body. Anatomy and physiology are very closely associated as the structures (anatomy) of a body are influenced by or reflective of their function (physiology).

Student Goals and Class Objectives:

1. To learn, comprehend, and use proper anatomical terminology. This will include learning the roots of words to better understand how anatomical terminology is used in medical and science careers.
2. To gain familiarity with basic human physiology.
3. To understand the basic details of physiology from cells to tissues to organ systems to organisms. We will work together to understand how cellular processes inform organ processes. We will form a working knowledge of how body systems work independently and together.
4. To form a knowledge base with which we will be able to discuss clinical implications of physiology.

Texts:

Required:

Marieb, E.N. and L.A. Smith. 2016. Human Anatomy & Physiology Laboratory Manual. 12th edition (cat version). Pearson Education Inc. publishing as Benjamin Cummings.

Martini, F.H., Ober, W.C., Nath, J.L., Bartholomew, E.F., and Petti, K.F. 2018. Visual Anatomy & Physiology, 3rd Edition Pearson Education Inc.

Attendance (Lecture and Lab):

Class attendance requirements are outlined in the Department of Biology (DoB) Attendance Policy posted [here](#). Unexcused absences from class will result in a 5 percent reduction from the class participation grade per absence. Unexcused absences from lab will result in a 1 percent reduction from the overall lab grade per absence.

Class Discussions and Professionalism:

Class discussions will be conducted on various topics throughout the semester. Class discussions will be conducted respectfully and professionally. Anatomy is an important topic for students on the path to becoming professionals in medical and research careers and our discussions will be conducted professionally, as in those careers. We will use proper terminology to discuss topics. Each student is expected to be respectful of their peers and to hold everyone, including me, responsible for properly addressing students by their chosen names, pronouns, and respective titles and using proper terminology in discussions. If any student wishes to discuss class discussion, content, or any other aspect of class with me they are welcome and encouraged to do so. If you feel uncomfortable speaking with me for any reason, I encourage you to contact the [Office of the Dean of Students](#) with your concerns.

Exams and Grading:

Tests:
Two tests will be conducted at approximately the 1/3 and 2/3 points of the class calendar. These tests will be scheduled for the first hour of class. As this is an 8AM class students will be allowed to begin when they and I have arrived in the classroom, but tests will end at the 8:55 break exactly. The second half of class on those days will be conducted as usual following the 8:55 break. **100 points each**

Final Exam:

The final exam will be cumulative and cover the entire semester's worth of information. **100 points**

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Class Videos:

Throughout the semester assignments using Flipgrid. Students will be asked to make short videos, map, or describe physiology or physiological systems and show examples of how physiology works. **10 points each**

Class Participation:

Attending class is important for fully understanding any subject. In addition to attending and participating in typical classes, we will also do some activities, as spacing and time permit to show how physiology works. **5 points each class**

Lab Quizzes:

Lab quizzes will be conducted each lab meeting to assess preparedness for the lab or reiterate important points from the previous lab. The lowest of these will be dropped. **10 points each**

Online Lab Assignments:

Online assignments will require use of the MyLab and Mastering A&P from Pearson. More information on these assignments will be discussed during class and/or lab. **10 points each**

Lab Exams:

Lab exams will be conducted at the halfway mark and the final week of this semester. These exams will include practical style questions and use of example data associated with lab activities. **50 points each**

The point breakdown for the course will be as follows:

Class tests:	- worth 200 points
Final Exam:	- worth 100 points
Class Videos:	- worth 50 points
Class Participation:	- worth 100 points
Laboratory Quizzes:	- worth 100 points
Online Lab Assignments:	- worth 50 points
Lab Exams:	<u>- worth 100 points</u>
	Total 700 points

- Videos are due Fridays by 11:59PM. Late video posts will be discounted 10% (1 point) per day.
- Online Lab work is due online on Mondays by 11:59PM. Late lab work will be discounted 10% (1 point) per day.

Grading Scale:	100	A+	94-99	A	90-94	A-
	87-89	B+	84-86	B	80-83	B-
	77-79	C+	74-76	C	70-73	C-
	67-69	D+	64-66	D	60-63	D-
			<60	F		

Academic Support Services:

Academic support resources are available to students at no charge through the Academic Learning Center, the Writing Center and Disability Services. The Academic Learning Center offers course-specific tutoring, academic skills workshops, hands on learning strategies instruction, and academic counseling to supplement faculty advisement. The Writing Center offers tutoring to assist with writing and reading support for any class. The Student Accessibility and Advocacy office is the source for impairment-related accommodations consistent with the ADA and its amendments. Students who receive accommodations from the SAA office should meet with course instructors privately and in a timely manner to discuss the Academic Accommodation Letter (AAL) provided by that office. **Please note that IEPs and 504 plans do not apply to college level courses.** The ALC office is located in Teel 309A and the ALC Tutoring Lab is accessible from the tunnel near Jake's Place. Contact the ALC at 610-921-7662 and academiclearningcenter@albright.edu; For in-person or online chat sessions (with a whiteboard for revision and options for audio-video or type chat), use our appointment system at <http://alb.mywconline.com>. For e-mail-based feedback, you can submit an essay [using this form](#); and for the Student

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Accessibility and Advocacy office please contact Sherry Young, Director of Student Accessibility and Advocacy, by email at SAA@albright.edu or by phone at 610-921-7503. Our office is located in the Student Center Conference Room.

Academic Integrity

The College policy on dishonesty as stated in the section “Academic Dishonesty Policy” in the current Albright College Catalog applies to all aspects of this course, including exams and papers. Academic dishonesty is taking credit for another person’s work and attempting to pass it off as your own. It includes: 1) copying from another student during exams and quizzes; 2) allowing someone to copy from you or providing someone with a copy of your work that results in plagiarism; 3) Presenting someone else’s ideas as your own without express permission and crediting them; 4) Plagiarizing (copying) material from books, articles, and electronic sources for direct use in your work; 5) using cheat sheets, notes, cell phones, etc. to gain outside information during a test or quiz. A student charged with academic dishonesty will be given written or oral notice of the charge, will receive an F on the assignment in question, and the case will be referred to the Provost. At the Instructors' discretion, the student may receive an F for the course. Repeat offenses, in one class or different classes can lead to more severe penalties (e.g. academic dismissal). Please familiarize yourself with this policy.

Class Schedule

This schedule is subject to change due to student interest and classroom discussions. All changes will be announced through Canvas ahead of the class meeting.

Module/Week	Topic	Reading in Text
1	Homeostasis	Ch. 1.17 – 1.18
	Glands of the Skin	Ch. 5.6 – 5.12
2	Bone physiology	Chs. 6.10 – 6.12
	Muscle Physiology and Reflexes	Ch. 9, 12.11 – 12.15
3	Nerve Physiology and Conduction	Ch. 11.6 – 11.14
	Sensory and Motor Pathways	Ch. 13.16 – 13.22
4	Autonomics and Special Senses	Chs. 14 – 15
	Endocrine Hormones	Ch. 16
4	Cardiac Physiology	Ch. 18.9 – 18.16
	Blood and Immunity	Chs. 17 & 20
5	Respiratory Physiology	Ch. 21.8 – 21.18
6	Digestive Physiology	Ch. 22
7	Introduction to Metabolism	Ch. 23
	Urinary Physiology	Ch. 24
7	Fluids and Homeostasis	Ch. 25
	Reproductive Physiology	Ch. 26

7.5

Final: Date to Be Determined

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Laboratory Information:

In this laboratory we will complete some more physiologically based exercises as well. Your mastery of the information will be demonstrated on quizzes following each unit. In this way, you can learn the information as we move through the course, rather than saving your studying time for one or two major laboratory exams. Worksheets which allow you to present, analyze and discuss your data, will provide a mechanism for you to demonstrate your understanding of the more experimental laboratory exercises. Your laboratory manual contains the bulk of worksheets to be completed. We will discuss these before you leave lab so that we can identify difficult topics and help you all to be successful in the lab.

Lab Safety (Mostly borrowed from BIO 151 Lab; i. e. you may have seen this before!):

Students are expected to **follow all lab safety rules at all times**, including arriving in lab with appropriate footwear. Students who are not wearing proper footwear will be sent away to procure acceptable footwear. At times we will be using sharp tools. Safe use of tools will be further explained in labs but includes properly securing tools when not in use and proper handling of tools. **Food, drinks, candy, gum, and other consumables including tobacco and vaporizer products are not permitted in laboratory spaces.** Any food, drink, or other consumables brought into lab must be disposed of. Failure to follow proper safety procedures may lead to dismissal from the lab, at the discretion of the instructor or the Environmental Health and Safety Officer. A handout on safe lab practices will be provided, which must be signed by the student prior to participation in the lab.

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Week	Topic	Chapters in Lab Manual
1	Introduction, histology, skin	Ex. 1, 6, 7
	Bones and Muscles	Ex. 8, 14
2	Nerve Intro and Review	Ex. 15, 17
	Reflexes and Sensation	Ex. 21, 22
3	Visual Systems	Ex. 23, 24
	Hearing and Equilibrium	Ex. 25
4	Olfaction and Taste	Ex. 26
	Midterm Exam	
5	Blood and Typing	Ex. 29
	Blood Pressure and Pulse	Ex. 33
6	Respiratory Physiology	Ex. 37
	Digestive Physiology	Ex. 39
7	Urinalysis	Ex. 41
	Reproductive Physiology	Es 43, 44
7.5	Final: Last Lab of Class	