BIO 234 Human Anatomy and Physiology I – Fall 2023

Class Meets: MWF 8:00 AM, Science
Lab Meets: Mon 1:00 PM, Science 007

Instructor: Dr. Ian N. Cost
Office: Science 231
Office Phone: 610.921.7728
Email: icost@albright.edu (6am – 8pm)
Open Office: Tues 09:00 – 11:00 and Fri 13:00 – 15:00 or by appointment
Course Center Hours: TBD

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

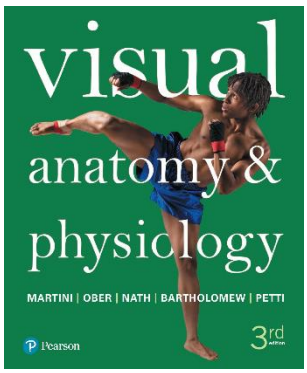
Student Goals and Class Objectives:

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:

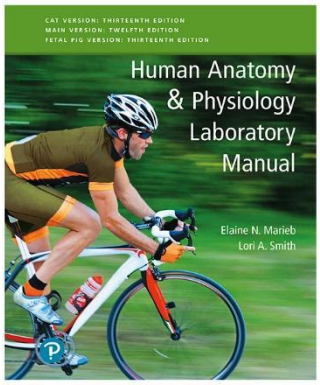
Highly Recommended

Martini, F.H., et al. 2018. Visual Anatomy & Physiology, 3rd Edition Pearson Education Inc.



Also Recommended

Marieb, E.N. and L.A. Smith. 2019. Human Anatomy & Physiology Laboratory Manual. 13th edition (cat version). Pearson Education Inc



Open Office:
Open office times are dedicated times during which I do not have set meetings where I am available on a first come first serve basis to talk with students. You are invited to come by my office for any reason. Some examples of topics during office hours include career advice, research questions, college advice, saying hello, asking for a pop tart because you missed breakfast, seeking recommendation letters, coursework, and course material. One need not think of the "perfect question" to come to open office hours. If students need to speak with me outside of the times listed above send an email and make an appointment at any time.

Course Center:
These hours will take place in a classroom in the science building. These are dedicated times where students will be

able to meet with one another, tutors, and myself, in groups or alone. During this time students will also be afforded an organized space in which they are encouraged to study, ask questions about course material, and work on group work. While this is an open format space, we do wish to maintain this time as a course-work specific time. If one wanted to ask questions pertaining to something other than coursework, please make an appointment or drop by office hours.

Attendance:
Class attendance requirements are outlined in the Department of Biology (DoB) Attendance Policy posted here. As outlined in this policy, it is the student's responsibility to make contact prior to absences for illness and within 24 hours regarding unforeseen emergencies. Athletic or other non-illness related absences should be communicated at the student's earliest convenience. All student athletes should provide a schedule of conflicting dates within **the first two weeks of classes** so that we can make plans regarding these absences. Unexcused absences from class will count as a **reduction of 3 points from the participation grade per absence**. Tardiness of greater than 10 minutes will result in a partial reduction of the participation grade. Every student has 3 passes where they can miss class without any participation points being lost. More information will be discussed during the first class.

Class Discussions and Professionalism:
Class discussions will be conducted on various topics throughout the semester. Class discussions will be conducted respectfully and professionally. 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.

Late Policy:
Deadlines are given below in the course calendar but will also be communicated in class. If an accommodation, illness, or other event causes a student to require a flexible deadline for any assignment, then the student must reach out prior to the due date (sudden illnesses – COVID, accidents, etc. – should be communicated as soon as reasonably possible). Flexible deadline requests are entirely the responsibility of the student; reach out to me with the length of extension you need so that we can discuss how to make sure your work is satisfactorily completed.

If a student is interested in an honors module for this course I ask that they please contact me within the first two weeks of class so that we can plan appropriately.

Exams and Grading:
Class Exams:
All assessments of knowledge in anatomy are, practically speaking, cumulative. Tests may consist of short answers, multiple choice, and essay questions. Test material will consider only classroom material. These will be further discussed during class time. **100 pts. each**

Final Exam:
As stated above, anatomy is a cumulative topic. The final exam, therefore, will be cumulative and cover the entire semester's worth of information. All topics of human anatomy will be eligible for the final and questions will include practical applications of anatomy to real-life situations. **100 pts.**

Class and Lab 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 anatomy works. Laboratory dissections in human anatomy are one of the main ways of learning anatomy. Dissections will be intense in their rigor and will require the attention and efforts of everyone in the lab group. More will be discussed during the laboratory period. **3 pts. each class/lab**

Classwork:
Classwork will consist of group work as well as solo assignments that students will either work on in class or are expected to produce outside of class. These will include clinical discussion questions, video explanations, and other work as discussed during class. All of this work serves to identify key functions, structures, and anatomical background for the student of human anatomy. **10 pts. each**

Case Studies:
Case studies will be assigned for each general topic. These will be clinical questions that require knowledge from current and previously learned topics covered in class. These will be due on the review dates and may help students to properly prepare for exams and essays presented during exams. **20 pts. each (100 pts.)**

Lab Exams:
The laboratory period will be broken down into thirds. Each section will be assessed equally. **50 pt. lab assessments (three) → 150 total**

Grading:

Class Exams:	- worth 400 points
Final Exam	- worth 100 points
Class and Lab Participation:	- worth 150 points
Classwork:	- worth 100 points
Case Studies	- worth 100 points
Lab Exams:	- worth 150 points
	Total 1000 points

Notes on Assignments:

- **File types accepted on Canvas submissions**: Word, PDF, and PowerPoint documents are the only file types that can be turned in on Canvas.
- If videos are assigned, they are due Fridays by 11:59PM. Late video posts will be discounted 10% (1 point) per day. All assignments done outside of class are short and should require no more time than studying the same material. Some time may be given during class to work on these assignments as time permits.
- The laboratory portion of this class counts as the 4th hour. These assignments are integral to your understanding of the structures and functions of anatomy. You may require additional time to study and better understand the material. Open laboratory times will be **Fridays 9am – 3pm**.

Grading Scale for Final Grades in This Class:

> 98 A+	93-98 A	90-92 A-
87-89 B+	83-86 B	80-82 B-
77-79 C+	73-76 C	70-72 C-
67-69 D+	63-66 D	60-62 D-
	<60 F	

Academic and Health Support Services:
Student Success Center (SSC)
Subject Area Tutoring: Course-specific peer tutoring is available for many general education classes at the 100-200 level including small-group tutoring and Supplemental Instruction (SI). You can schedule an in-person or online session with a peer tutor by selecting the 'Subject Area Tutoring Schedule' at https://alb.mywconline.com/ and limiting the schedule by course. Subject area tutoring takes place in the Peer Tutoring Studio located in the outdoor tunnel near Jake's Place and can be reached at SSC@albright.edu.

Writing Center: Writing center peer tutors will work with you at any stage of the writing process for any course and personal/creative writing. The writing center can also help you prepare for class presentations and practice

strategies for college-level reading. The center is located in Jake's Place near the mailroom and can be reached at writingcenter@albright.edu or (610) 921-7540 with in-person and online appointments available at https://alb.mywconline.com/.

Success Coaching: The SSC also offers one-on-one academic coaching on study skills, time management, note-taking, and learning strategies. All students have a success coach. You can find out who your success coach is in Lions' Edge. To schedule a meeting with your success coach email them directly or contact the SSC by phone at 610-921-7662 or email SSC@albright.edu. The SSC main office is in Teel Hall 309A.

Gingrich Library:
The Gingrich Library provides resources to assist Albright students with their class projects and research needs. Library materials include books, e-books, print and electronic journals, databases and DVDs. All students have complete access to the Gingrich Library catalog, electronic books, and its electronic databases from on-campus, in residence halls or off-campus. Reference librarians are available in the Center for Computing and Mathematics (CCM) to answer questions and help students use resources and find appropriate materials. Students are encouraged to contact a librarian at any stage of the research process. Real-time chat services are available through the library's portal at the library's main page. The portal to the library can be reached from here.

Office of Student Accessibility and Advocacy:
Consistent with the ADAAA and Section 504 of the Rehabilitation Act, Albright College welcomes students with disabilities into the college's educational programs. If you need impairment-related academic adjustments in this course, please contact Sherry Young, Director of Student Accessibility and Advocacy, by email or by phone at 610-921-7503. Our office is located in the Student Center Conference Room. Students should contact the office to schedule an appointment. Students who use accommodations should meet with course instructors privately and in a timely manner to discuss their Academic Accommodation Letter (AAL). Please note that IEPs and 504 plans do not apply to college-level courses.

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.

Classroom Recording Policy:
The audio or visual recording of class lectures, discussions, simulations, and other course-related activity by either students or instructors is governed by the College's class recording policy, available in the Catalog. Albright's policy on class recording balances the needs of students who are differently abled, the intellectual property concerns of its instructors, and the privacy of its students. Any audio or visual recording made by a student during a class, regardless of the recording device, requires the instructor's written consent prior to the class and the student's signed agreement with the terms of the College's policy. Prior to a student recording of any class activity, the student and the instructor must sign a recording agreement and file it with the Office of Student Accessibility and Advocacy (if the recording is an approved disability accommodation) or with the Academic Dean's office (if not an accommodation). Violations of this Class Recording Policy may be directed through academic dishonesty procedures or the Office of Community Standards, and could involve civil or criminal violations.

Mental Health Matters:
The Gable Health and Counseling Center offers students the chance to meet with therapists at no charge. Students are encouraged to make appointments to receive confidential care for small and large issues. If you, or anyone close to you on campus, are suffering from any mental health issues, you are encouraged to reach out and use the services on campus to get the care you need. The office is open from Monday through Friday 8:30am - 4:30pm and appointments are scheduled from 10-6 M-TH and 9-5 on Fridays. Students can set up a meeting with a therapist on campus by walking to the Gable Health Center located on campus at 1829 Linden Street or by calling the Gable Health Center at 610-921-7532.

Diversity, Equality, and Inclusion in this Course:
Much of science is subjective and has been historically based on the ideas and hypotheses of a collection of privileged voices. The readings in this course are based in part on the work done by this small and privileged group of individuals that were, and mostly still are, white men. We will discuss research and work done by scientists that have subsequently, some quite recently, been recognized as leaders in the field of human anatomy, physiology, and functional morphology that do not identify as white men. Should you come across any contributions to this field that you think we ought to incorporate into our coursework or simply wish to discuss the merits of in light of this topic, please feel free to contact me in person, via email, or anonymously (by leaving a note either under my office door or in the building secretary's office on the third floor).

My expectations are that we will be a learning community that appreciates the successes, struggles, and skill sets that we each bring to this class and that we will learn from one another. This course will be a learning environment that is comfortable for students to explore human anatomy and physiology. It is within that goal that this course will support and enrich student learning by using diverse learning styles in classroom discussions, promoting individualized thinking styles, honoring each student's perspectives and experience, and by being respectful of all members of our learning community.

Class Schedule:

There are three class meetings per week. This schedule is subject to change based on class need and discussions.

Class	Topic	Classwork/Exams	Text Readings
8/28	Introduction		Ch. 1
8/30	Bones and Axial Skeleton		Chs. 6, 7
9/1	Axial Skeleton		Chs. 6, 7
9/4	Axial Skeleton		Chs. 6, 7
9/6	Appendicular Skeleton		Chs. 6, 7
9/8	Appendicular Skeleton		Chs. 6, 7
9/11	Joints		Chs. 6, 7
9/13	Joints & Review	**Case Study 1**	Chs. 6, 7
9/15	**Introduction and Skeleton Exam**	**Exam, Joint Video**	Chs. 1, 6, 7
9/18	Muscle Tissue		Ch. 9
9/20	Axial Muscles – Head, Neck, and Back		Ch. 10
9/22	Appendicular Muscles – Arm		Ch. 10
9/25	Appendicular Muscles – Forearm, Hand		Ch. 10
9/27	Appendicular Muscles – Thigh		Ch. 10
9/29	Appendicular Muscles – Leg, Foot		Ch. 10
10/2	Muscles & Review	**Case Study 2**	Ch. 10
10/4	**Muscle Exam**	**Exam, Muscle Video (Fri)**	Chs. 9 – 10
10/9	Introduction to Nerves		Ch. 11
10/11	Brain – Regions		Ch. 13
10/13	Brain – Cranial Nerves		Ch. 13
10/18	Brain and Spinal Cord connection		Chs. 12 – 13
10/20	Spinal Cord – Spinal Nerves and Reflexes		Ch. 12
10/23	Special Sense Organs		Ch. 12
10/25	Neurology & Review	**Case Study 3**	Chs. 12 – 15
10/27	**Brain and Spinal Cord Exam**	**Exam, Brain Video**	Chs. 12 – 15
10/30	The Heart		Ch. 18
11/1	Blood and Vessels (Group Session)		Ch. 19
11/3	Blood and Vessels (Group Session)		Ch. 19

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Class	Topic	Classwork/Exams	Text Readings
11/6	Endocrine Organs and Lymphatics		Chs. 16 & 20
11/8	Respiratory Organs		Ch. 21
11/10	Digestive Organs		Ch. 22
11/13	Digestive Organs		Ch. 22
11/15	Thorax and Digestion Review	**Case Study 4**	Chs. 18 – 22
11/17	**Heart and Vessels Exam**	**Exam, Circulation Video**	Chs. 18 – 22
11/20	Kidney Overview		Ch. 24
11/27	Nephrons and Bladder		Ch. 24
11/29	Female Reproductive Organs		Ch. 26
12/1	Female Reproductive Organs	**Final Video**	Ch. 26
12/4	Male reproductive Organs		Ch. 26
12/6	Male reproductive Organs		Ch. 26
12/8	Review	**Case Study 5**	Chs. 21 – 26
Final	**Final Exam**	**Final Exam**	Chs. 21 – 26

Laboratory Information:
Laboratory exercises in this class will be explorations of anatomy. We will begin each lab with a few notes on structures before "discovering" anatomy. We will not be testing hypotheses in this course. Your mastery of the information will be demonstrated through two lab tests and one final project. This project will be constructed through your hard work over the semester and represent your skills and knowledge acquired over the semester. Anatomical structure sheets are provided 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.

Lab Safety:
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.

Laboratory Schedule:

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

Class	Topic	Classwork/Exams	Dissection Manual
8/28	Introduction, Histology, and Skin		Ex. 1, 4, 6, 7
9/4	Skeleton & Joints		Ex. 9 – 10
9/11	**Intro & Skeleton Exam**	**Intro & Skeleton Exam**	
9/18	Head, Neck, and Back Musculature		Ex. 11 – 13; Cat 1
9/25	Appendicular Musculature – Forelimb		Ex. 11 – 13; Cat 1
10/2	Appendicular Musculature – Hindlimb		Ex. 11 – 13; Cat 1
10/9	Brain and Spinal Cord		Ex. 17, 19, Cat 2
10/23	Peripheral Nerves		Ex. 19, Cat 2
10/30	**Muscle & Nerve Exam**	**Muscle & Nerve Exam**	
11/6	Heart and Brain Circulation		Ex. 30, 32; Cat 4
11/13	Systemic Circulation		Ex. 32; Cat 4
11/20	Respiratory & Digestive Systems		Ex. 36, 38; Cat 6, 7
11/27	Urinary System & Reproductive System		Ex. 40, 42; Cat 8, 9
12/4	**Cardiovascular & Urogenital Exam**	**Cardiovascular & Urogenital Exam**	