

GENERAL HUMAN ANATOMY (INTEG BI 131)

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Vesalius, 1543/1555. De humani corporis fabrica libri septem (p.164)
(https://www.nlm.nih.gov/exhibition/historicalanatomies/vesalius_home.html)

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Introduction

General Human Anatomy (IB131) is a human biology course focused on the study of human body structures and functions at both macroscopic and microscopic levels. This course is taught by organ systems, for example, muscle system, nervous system, respiratory system, and so on. Structural relationships will be integrated from the scale of the microscopic structure of cells and tissues to the gross (macroscopic) level structure of organs, and the spatial relationships between organs within each system, as well as within the body as a whole.

This course is for YOU if: you are simply fascinated about anatomy the subject itself; you want to understand how your body is built and functions; you are preparing for a career in health sciences; you are interested in pursuing biomedical, paleontological, physiological, and many other aspects of research; or all above. Anatomy is a science with deep historical roots and serious intellectual investigation for at least 2300 years. It is still a dynamic field of study attracting researchers and educators to investigate the human body. Learning human anatomy will also allow you to appreciate the newly developed medical science and techniques that improve human life.

By end of this course, I hope you will feel comfortable using appropriate terminology to discuss anatomy, understand the basic structures and functions of the organ systems, try to apply your anatomy knowledge to stay healthy and/or contribute to the health field. Please note, anatomy is a huge discipline with dozens of specialized branches. Instead of teaching every single detail, this course aims to guide you through the human body as a whole with an emphasis on general functions and help you build a fundamental understanding of anatomy and the human body. Some details are left out. For example, CN I and CN II are not conventional peripheral nerves (PNS), but we would not further discuss whether they should be assigned to PNS or CNS (Central Nervous system). You will learn that in your neuroanatomy/neuroscience class.

This course is designed to be taken concurrently with 131L.

Instructors

Faculty Instructor

Juan Liu, PhD
5112 Valley Life Science Building

ATT - Anatomy Tea Time – come and enjoy a cup of tea with Dr. Liu and chat about anatomy. ATT is semi- virtual in 2022 Fall. Anatomy Tea Time (ATT) 2022 is semi-virtual. We'll be meeting in person, but tea won't be provided at this time. Please wear a mask when you come for your scheduled ATT one-on-one slot or the swing-by group slot.

- Tuesday 2 pm – 3 pm, one-on-one meeting at 5112 VLSB. Sign up for your slot follow [this link](#) or the instructions in bCourses announcement. Each slot is scheduled to be 10 minutes and is subject to change as the semester goes. I may have students before and after your slot, so please respect other people's time and privacy, only come during your scheduled time slot.
- Thursday 11 am - 12 pm, swing-by group meeting at 5112 VLSB. Any enrolled student can drop. Come and go during that time whenever suits you.

Email contact - When email me or the head GSI, make sure you have “IB131” in the subject line and using the official name you use with the University and/or use your email address registered with the University. If I cannot tell that you are officially a student at Berkeley and enrolled in IB131 this semester, I may not reply to your email.

Head GSI of IB 131 and 131L

Eric Holt
Office hour – TBD (see bCourses announcement)

Course Materials

Lecture slides: my lecture slides will be available at bCourses site.

Required Textbook

Marieb, Brady, & Mallatt, Human Anatomy, 9th, (8th, or 7th edition). Pearson.

This is a high-quality anatomy textbook with great supportive learning material. Certainly, a new book of the newest edition (9th) can be very costly. More

economical options include previous editions (8th or 7th) and e-Text book. I have also reserved e-book via UC BEARS (UC Berkeley Electronic and Accessible Reserves) to provide access to scanned versions of books in copyright.

https://ucbears.lib.berkeley.edu/991053673069706532_C121126200/view

The books in UC BEARS are available 24/7. Due to copyright law, some restrictions apply:

- Students need to authenticate through CalNet in order to check out the book.
- Loan period is two hours, can be renewed if another patron hasn't checked it out after the 2 hour loan period expires.
- The number of digital copies available for simultaneous lending is determined by the number of physical copies owned by UC Berkeley. The print will not be available to circulate while the book is on E-Reserve.
- When the title is deactivated in UC BEARS at the end of the semester, the physical copies will be released for circulation.

In rare cases, the terminology or description of the certain anatomical structures in an older version of the textbook may not be consistent with the newest edition or my lecture slides. For such incongruity, we'll go by my lecture slides, then the 9th edition of the textbook.

Recommended Supplemental Texts & Materials:

Kapit & Elson, The Anatomy Coloring Book. 4th Edition. Pearson.

3D Model Supplements:

The Visible Body, UC Berkeley license via Library

- Anatomy and Physiology (by system): <https://aandp-visiblebody-com.libproxy.berkeley.edu/index.php>
- Human Anatomy Atlas: <https://atlas-visiblebody-com.libproxy.berkeley.edu/index.php>

Course Capture

Course Capture of this course is available for enrolled students as a courtesy for your study and review. The recordings should be viewable in your bCourses. All contents are copyrighted. Any form of duplication or distribution of the course capture video is prohibited. I reserve the right to seek legal action.

Course logistics

IB131 bCourses Site

I will use [bCourses](#) extensively, including the announcements, lecture slides, lecture recording, quizzes/exams, and discussion board. Students are encouraged to post questions on course material that other students are encouraged to address. If needed, your instructors will do their best to participate in the discussion.

Instruction Mode

Lectures of IB131 offer in-person instruction in 2022 Fall, unless otherwise noticed.

Lecture Schedule

Aug 24, 2022- Dec 2, 2022.
Monday, Wednesday, and Friday, 11:00 am - 11:59 am Pacific Time
2050 VLSB

Quiz, Exam, Assignments, and Grades

There are two assignments, 10 weekly quizzes, two midterm exams, and one final exam. All the quizzes and exams will be held in person, unless otherwise noticed.

The two assignments, practice quiz (on syllabus) and integrity pledge, are open book assignment. They both are available on bCourses during the first two weeks of this semester.

The weekly quiz has 2 to 5 multiple choice questions and is worth 5 points in total. The quizzes will be posted on bCourses and released during designated lecture time (see course schedule). At that time, you will be given an access code for quizzes. Once you start on bCourses, you have 5 minutes to answer questions and submit. If you cannot access bCourses during lecture time, you will be provided the same questions in another format and submit a hand-written answer sheet.

The midterm exams will be scheduled at lecture class time, whereas the final exam will be scheduled at the campus designated exam time. See the course schedule below for exam time.

Total possible points: 368

Assignment 1: Practice quiz (test on syllabus) – 2 points

Assignment 2: Integrity pledge – 1 point

Quiz 1 – 10 with one lowest scored drop – total 45 points

Midterm 1 – 100 points

Midterm 2 – 100 points

Final exam – 120 points

Bonus points opportunities: **5 bonus point** for completion of the UC Berkeley course evaluation for IB 131 2022 Fall (<https://course-evaluations.berkeley.edu/>). Upon completing an evaluation, you are shown a list of all your evaluations, along with the status for each. If you'd like to receive the bonus points, please take a screenshot showing that you have completed an evaluation for IB 131, and email the screenshot by 12/9/2022 to the head GSI.

Final grades will be calculated and accumulated from a total number of points earned divided by the total possible from, assignments, quizzes midterm and final exams. Grades will not be curved. Final grades will be rounded up to the nearest whole number. Note: grades may not be automatically submitted and updated in bCourses.

Grading Scale

A+	97-100%
A	93-96%
A-	90-92%
B+	87-89%
B	83-86%
B-	80-82%
C+	77-79%
C	73-76%
C-	70-72%
D+	67-69%
D	63-66%
D-	60-62%
F	0-59%

Lecture Outlines and Course Schedules

Studies of anatomy are generally approached in regional anatomy or systematic anatomy. The former studies all structures in a single body region, such as the head, neck, and abdomen. The systematic approach studies all the organs through the body with related functions, such as the muscular system and skeleton system. This course will use the systematic approach, but organs interact with adjacent structures, and a single organ may belong to multiple systems, so cross-reference will present thought out of the lectures.

Date	Day	Lec. #	Lec Topic/quiz #	textbook Chapter #
24-Aug	Wednesday	1	Overview -- organization of this course, orientation of human body and human anatomy	Syllabus, Chapter 1 & 4
26-Aug	Friday	2	Integument system	Chapter 5

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29-Aug	Monday	3	Skelton system: bone, cartilage, and joints	Chapter 6 & 9
31-Aug	Wednesday	4	Skeleton system: axis skeleton: head	Chapter 7
2-Sep	Friday	5	Skeleton system: axis skeleton: vertebral column <u>Quiz #1, contents of Lec. 1 – 4</u>	Chapter 7
5-Sep	Monday		NO LEC - Academic & Administrative Holiday	
7-Sep	Wednesday	6	Skeleton system: appendicular skeleton	Chapter 8
9-Sep	Friday	7	Skeleton system: appendicular skeleton <u>Quiz #2, contents of Lec. 5 – 6</u>	Chapter 8
12-Sep	Monday	8	Muscular system: tissue type, microscopic structures of muscle	Chapter 10
14-Sep	Wednesday	9	Muscular system: skeleton muscles part 1 head	Chapter 11
16-Sep	Friday	10	Muscular system: skeleton muscles part 2 trunk <u>Quiz #3, contents of Lec. 7 – 9</u>	Chapter 11
19-Sep	Monday	11	Muscular system: skeleton muscles part 3 extremities	Chapter 11
21-Sep	Wednesday	12	<u>MIDTERM 1 – Lectures 1-11</u>	
23-Sep	Friday	13	Respiratory System: air way	Chapter 22
26-Sep	Monday	14	Respiratory System: lung and pleurae	Chapter 22
28-Sep	Wednesday	15	Respiratory System: mechanism of ventilation	Chapter 22
30-Sep	Friday	16	Digestive System: alimentary canal 1 <u>Quiz #4, contents of Lec. 13 – 15</u>	Chapter 23
3-Oct	Monday	17	Digestive System: alimentary canal 2	Chapter 23
5-Oct	Wednesday	18	Digestive System: glands	Chapter 23

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7-Oct	Friday	19	Digestive System: mesentery and peritoneal cavity <u>Quiz #5, contents of Lec. 16 – 18</u>	Chapter 23
10-Oct	Monday	20	Cardiovascular system: blood	Chapter 18
12-Oct	Wednesday	21	Cardiovascular system: heart	Chapter 19
14-Oct	Friday	22	Cardiovascular system: blood vessels 1 <u>Quiz #6, contents of Lec. 19 – 21</u>	Chapter 20
17-Oct	Monday	23	Cardiovascular system: blood vessels 2	Chapter 20
19-Oct	Wednesday	24	Cardiovascular system: blood vessels 3	Chapter 20
21-Oct	Friday	25	<u>MIDTERM 2 – Lectures 13-24</u>	
24-Oct	Monday	26	Nervous system: fundamentals of NS, and the CNS	Chapter 12 & 13
26-Oct	Wednesday	27	Nervous system: CNS	Chapter 13
28-Oct	Friday	28	Nervous system: CNS & PNS <u>Quiz #7, contents of Lec. 26 – 27</u>	Chapter 13&14
31-Oct	Monday	29	Nervous system: peripheral: PNS	Chapter 14
2-Nov	Wednesday	30	Nervous system: autonomic nervous system	Chapter 15
4-Nov	Friday	31	Special sense: vision (eye) <u>Quiz #8, contents of Lec. 28 – 30</u>	Chapter 16
7-Nov	Monday	32	Special sense: hearing and equilibrium part 1 (ear)	Chapter 16
9-Nov	Wednesday	33	Special sense: hearing and equilibrium part 2 (ear)	Chapter 16
11-Nov	Friday		NO LEC - Academic & Administrative Holiday	
14-Nov	Monday	34	Special sense: taste and smell	Chapter 16

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16-Nov	Wednesday	35	Lymphatic and Immune System	Chapter 21
18-Nov	Friday	36	Lymphatic and Immune System <u>Quiz #9, contents of Lec. 31 – 35</u>	Chapter 21
21-Nov	Monday	37	Endocrine System	Chapter 17
23-Nov	Wednesday		NO LEC - Non-Instructional Day	
25-Nov	Friday		NO LEC - Academic & Administrative Holiday	
28-Nov	Monday	38	Urinary System	Chapter 24
30-Nov	Wednesday	39	Reproductive system: female	Chapter 25
2-Dec	Friday	40	Reproductive system: male <u>Quiz #10, contents of Lec. 36 – 39</u>	Chapter 25
12-Dec	Monday		<u>Final exam – Lectures 26-40</u>	

Accommodations

If you have a disability (see below), sports conflicts, or religious needs. Please email me and the head GSI early in the semester for anticipated conflicts.

Potential Extracurricular Conflicts

Please notify me in writing by the second week of the term about any known or potential extracurricular conflicts (such as religious observances, graduate or medical school interviews, or team activities). I will try my best to help you with making accommodations, but cannot promise them in all cases. In the event there is no mutually-workable solution, you may be dropped from the class.

Students with Disabilities

UC Berkeley is committed to creating a learning environment that meets the needs of its diverse student body including students with disabilities. If you anticipate or experience any barriers to learning in this course, please feel welcome to discuss your concerns with me.

If you have a disability, or think you may have a disability, you can work with the Disabled Students' Program (DSP) to request an official accommodation. The Disabled Students' Program (DSP) is the campus office responsible for authorizing disability-related academic accommodations, in cooperation with the students themselves and their instructors. You can find more information about DSP, including contact information and the application process at <https://dsp.berkeley.edu/>. If you have already been approved for accommodations through DSP, please notify me and the head GSI via email.

Technology Support

UC Berkeley provides technology support for undergraduate and graduate students that may prove valuable in this course, including free software (software.berkeley.edu), device lending (technology.berkeley.edu/step) and the student helpdesk (studenttech.berkeley.edu/techsupport).

Academic Integrity and Ethics

You are among the top students in the world. I treat you accordingly and expect the highest standards of academic integrity from you. Any format of cheating is not tolerated in this course.

The student community at UC Berkeley has adopted the following Honor Code: **“As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others.”** The hope and expectation are that you will adhere to this code.

Collaboration and Independence: Reviewing lectures and reading materials and studying for exams can be enjoyable and enriching things to do with fellow students. This is recommended. However, unless otherwise instructed, homework assignments are to be completed independently and materials submitted as homework should be the result of one’s own independent work.

Cheating: A good lifetime strategy is always to act in such a way that no one would ever imagine that you would even consider cheating. Anyone caught cheating on a quiz or exam will receive a failing grade and will also be reported to the University Center for

Student Conduct. In order to guarantee that you are not suspected of cheating, please keep your eyes on your own materials and do not converse with others during the quizzes and exams.

Plagiarism: To copy text or ideas from another source without appropriate reference is plagiarism and will result in a failing grade for your assignment and usually further disciplinary action. For additional information on plagiarism and how to avoid it, see, for example:

<http://www.lib.berkeley.edu/instruct/guides/citations.html#Plagiarism>

<http://gsi.berkeley.edu/teachingguide/misconduct/prevent--plag.html>

Cheating on exams and plagiarism are two common examples of dishonest, unethical behavior. Honesty and integrity are of great importance in all facets of life. They help to build a sense of self-confidence, and are key to building trust within relationships, whether personal or professional. There is no tolerance for dishonesty in the academic world, for it undermines what we are dedicated to doing – furthering knowledge for the benefit of humanity.

More information about Academic Integrity can be found at <https://sa.berkeley.edu/conduct/integrity>.

How to Succeed in This Course

I trust you are a responsible grownup and have had formed your own learning styles. Here are just some suggestions on how to get the most out of this course, if you would like to have a particularly good final grade from this course.

1. Focus on both my lecture notes (slides) and the required textbook.
2. Make sure you take all the weekly quizzes, midterms, and final exams.
3. Anatomy is the language of medicine. Talking to your friends, classmates, family, and even yourself will help you remember it.
4. Anatomy is not all about memorizing terms. Trust me and follow the pace of my lectures, I'll try to make it interesting while going over the necessary terms.

Final notes:

Intellectual course materials, including lecture slides, lecture recording, quiz/exam questions that I provide to you are copyrighted and for your use only. Distribution of course materials to public websites, social media, or others is prohibited.

Learning and teaching anatomy is a fun journey in my life. I hope you will enjoy the class as much as I do. Welcome to IB 131 2022 Fall, and I look forward to learning with you!

Go anatomy!