USC Dornsife College of Letters, Arts and Sciences

Course ID and Title: HBIO 301 – Human Anatomy

Units: 4

Term - Day - Time: Spring Maymester 2025: May 13 - June 10,

M/Tu/W/Th/F 10:00 a.m. – 12:15 p.m.

Location: TBA

Lab: M/Tu/W/Th 1:30 p.m. - 4:20 p.m.

Location: PED B7

Course Instructor: Kurt Kwast, Ph.D. **Office Hours:** TBA and by appointment

Office Hour Location: TBA
Contact Info: kwast@usc.edu

Supplemental (Peer) Instructor (SI): TBA if available

Review Sessions: TBA

Contact Info: uschbio301si@gmail.com

Location: TBA

Laboratory Instructor: Joshua Carlos, M.S. **Office Hours:** TBA or by appointment **Contact Info:** jcarlos6@usc.edu

Office: PED 109

Laboratory Director: Anh-Khoi Nguyen, Ph.D.

Office Hours: by appointment Contact Info: agnguyen@usc.edu

Office: PED 109

Course Description

Exploration of the anatomical structures of the human body to gain a fundamental understanding of the structure and function of body organs and systems and their interactions, emphasizing the tissues and structures that comprise the major organ systems of the body as well as functional implications of these structural relationships.

Learning Objectives

The primary learning objective is for students to be able to identify the structural components of the human body and describe their functional attributes. Specific learning objectives include the following:

- Develop a vocabulary of appropriate anatomical terminology in order to be able to effectively communicate information related to anatomy.
- Identify and describe the different levels of organization (*i.e.*, molecules, organelles, cells, tissues, organs, organ systems, and whole organism) and how simpler levels contribute to more complex ones.
- Identify the structural components and be able to describe the functional attributes of each of the body's organ systems and the interrelationships within and between them.
- Use anatomical knowledge in order to predict physiological consequences and knowledge of function to predict anatomical features.
- Describe the pathophysiology of common diseases as well as use critical thinking skills to make real-world connections between life-style choices and human health.

Relevant Human Biology BS & BA Degree Learning Objectives Addressed in Part by This Course

- Develop a deeper comprehension of the central and cross-disciplinary concepts of human biology, which include bioenergetics, the interrelationship of human form and function, physiological homeostasis, and biomechanics.
- Develop proficiency in modern methodologies pertinent to research in biological and medical sciences.
- Think critically, analyze, synthesize, and use information to solve real-world problems.
- Develop sufficient depth of knowledge and skill for graduate study in the health professions or other biology-related disciplines or entry-level employment in a wide variety of health-related fields.

Prerequisite(s): None **Co-Requisite(s):** None

Concurrent Enrollment: None

Course Notes

A letter grade will be assigned for this course. The course is web-enhanced and will use Blackboard and Pearson's MyLab Mastering Suite. Pdf-formatted slides of all lectures will be provided <u>before</u> each lecture. In addition, some videos will be provided.

Technological Proficiency and Hardware/Software Required

Although there are no specific technology/software requirements *per se*, you will need an internet-enabled device with browser capabilities, such as a tablet, laptop or desktop computer, to access Blackboard, which will be the gateway for most assignments as well as the repository for lecture slides, videos, and other course



materials. Should we need to go online, lectures will be delivered via Zoom and exams will require <u>Respondus</u> <u>Lockdown Browser</u>. Support for these resources can be found at the <u>ITS Customer Support Center</u>.

USC Technology and Loaner Program

If students need resources to successfully participate in this class, such as a laptop or internet hotspot, you may be eligible for the university's loaner program. Please see the following links for additional relevant information: <u>USC Computing Center Laptop Loaner Program</u>; USC Technology Support Links: <u>Zoom information for students</u>, <u>Blackboard help for students</u>, <u>Software available to USC Campus</u>.

Required Readings

Human Anatomy, 9th edition, Marieb, E. N., Wilhelm, P. B., and J. Mallatt. Pearson Benjamin Cummings, San Francisco, CA, 2017 (ISBN: 9780135747551) with Modified Mastering A & P/ET VP A/C, 8/E, ISBN-13: 978-0134568034. Hardcopies of the text can be obtained from the campus bookstore and various online retailers including Pearson. There are many purchasing options including an eText, loose leaf, and hardback version of the text but you must purchase Modified Mastering as this is required for access to the Pearson website where all homework and pre-lecture assignments will be completed. It is not necessary for you to purchase Learning Catalytics as it will not be used this semester.

Human Anatomy Laboratory Manual. Matveyenko, M. A. B., Camacho, A., Kwast, K.E. and E. M. Kolb. The spiral bound hard copy is available for purchase at the campus bookstore and USC Custom Publishing, and an electronic version is available from USC Custom Publishing.

Description and Assessment of Assignments

Written Exams will be administered in person on specific days during the class period (see Course Schedule below). Exams will be used to access all of the learning objectives. Exams may include multiple choice, multiple answer, true or false, fill-in-the-blank, short answer, or essay questions. A request to take a make-up exam must be accompanied by evidence of a university-sanctioned excused absence (*e.g.*, a letter from a doctor, athletic release, etc.) and must be made before the date of the scheduled exam. Make-up exams may be given in a different format from that of the scheduled exam (*e.g.*, essay).

In-Class Work will be unscheduled and used to access all learning objectives, especially the last two. Work may include small group assignments, polls, a summary of lecture points, open-note quizzes, problem solving in groups, a submitted question of a "muddy point," or other individual assignments to be submitted or reported on by the end of class. When working in groups, all members will receive the same score for the work product. Students who miss an assignment as a result of either arriving late or leaving early will not have the opportunity to make up the work. However, the lowest three in-class assignments will be dropped to allow for occasional absences.

Pre-Lecture and Homework Assignments will be completed at the Pearson website, with a link provided in Blackboard. Typically, homework assignments will be due in the evenings and pre-lecture assignments before the beginning of the class period in which the material will be covered (the day of the week will vary depending on the lecture schedule). Please check the Pearson calendar every evening to see when specific assignments are due.



Participation

Students are expected to attend lectures in-person and to participate in in-class activities, which may include as noted above small group assignments, polls, a summary of lecture points, open-note quizzes, problem solving in groups, a submitted question of a "muddy point," or other individual assignments to be submitted or reported on by the end of class unless otherwise noted.

Grading Breakdown

Assignment	Points	% of Grade
In-Class Learning Assignments	50	5
Pre-lecture Assignments	50	5
Homework Assignments	100	10
Midterm Exam 1	120	12
Midterm Exam 2	120	12
Midterm Exam 3	120	12
Final Exam	190	19
Laboratory	250	25
Total	1000	100

Please note that, to be assigned a final letter grade in the course, a student must complete at least two midterm lecture exams, the final exam, and 80% of the assigned weekly laboratory activities.

Grading Scale

Letter Grade	Point Ranges	Grade Point Value
A	930 - 1000	4.0
A-	900 - 929	3.67
B+	870 - 899	3.33
В	830 - 869	3.0
B-	800 - 829	2.67
C+	770 - 799	2.33
С	730 - 769	2.0
C-	700 - 729	1.67
D+	670 - 699	1.33
D	630 - 669	1.0
D-	600 - 629	0.67
F	<600	0.0

Individual assignments, exams and labs will be scored but not assigned a letter grade. Only the final point tally will be assigned a letter grade.



Late Work

All in-class assignments will be due by the end of class and cannot be made up if missed. Similarly, all prelecture and homework assignments will have published due dates and will not be accepted late. However, the lowest three assignments of each will be dropped to allow for occasional in-class absences and missed prelecture or homework assignment deadlines. **Communication Policies**

Students are *strongly* encouraged to contact the instructor in regard to all matters involving course content or policy during office hours. Should you have a question about specific course content and cannot attend office hours, students are encouraged to submit their question to the course blog. Should you need to communicate with the instructor outside of class or office hours about a question other than course content, please email the instructor from your USC email account *making sure to include in the subject line the course number and your full name* (expect significant delays or no response if this information is omitted). Simple questions will be answered by email but for more complex discussions students may be instructed to visit office hours. Best attempts will be made to answer all emails within 24 hours, 48 hours over a weekend. Note that the instructor may not respond to non-emergency emails 24 hours preceding an exam and may not respond to emails sent from non-USC accounts.

To promote independence and critical thinking, students are encouraged to work through the following process for obtaining answers to course-related questions before contacting the instructor. First, consult the course syllabus. If you cannot find the answer you need, next please consult a classmate. If you still cannot find a satisfactory answer, email the instructor using your USC email *making sure to include the course number in the subject line*. In your email, please indicate the steps you have gone through to seek the answer for your question. Use your USC email account for all correspondence with the instructor.

Technology Policies

It is expected that students will use any internet-enable device(s) to participate in activities guided by the instructor alone. Such activities include looking up terms, doing research, and completing in-class work. Please make sure all electronic devices are silenced so as not to disturb classmates or the instructor during class. Use of electronic devices for other purposes during class is strongly discouraged and you may be asked to put a device away should your instructor deem it to be disruptive. If you require an internet-enabled device, please see the "Technological Proficiency and Hardware/Software Required" section above.

Policy on the Use of Generative Artificial Intelligence (AI)

Given that analytical and critical thinking skills are part of the learning outcomes of this course, all assignments should be prepared by and be the sole work of the student or students when instructed to work as a group. Students shall not solicit the help other persons or entities to complete any portion of an assignment. Developing strong competencies in these areas will prepare you for a competitive workplace. As such, the use of Al-generative tools is prohibited in this course and will be considered to be plagiarism to be reported to the Office of Academic Integrity.

Diversity, Equity, and Inclusion Statement and Norms of Classroom Dialogue

I and your laboratory instructors are committed to the creation and maintenance of inclusive learning spaces in which you will be treated with respect and dignity and where all individuals are provided equitable opportunity to participate, contribute, and succeed. In HBIO 301, all students are welcome regardless of race/ethnicity, gender identities, gender expressions, sexual orientation, socio-economic status, age, disabilities, religion, regional background, Veteran status, citizenship status, nationality, and other diverse



identities that each of you and the faculty bring to class. I view the diversity that all of us bring to this class as a resource that cultivates strength and benefit.

Your success at USC and beyond is enhanced by the innovation and creativity of thought that inclusive classrooms facilitate. The success of an inclusive classroom relies on the participation, support, and understanding of you and your peers. I encourage you to speak up and share your views, but also understand that you are doing so in a learning environment in which we all are expected to engage respectfully and with regard to the dignity of all others. We are all stewards of this learning space, and we should seek to learn not "win" in in-class dialogue. Learning can be at times an uncomfortable practice, but we must strive to suspend judgement, to listen, and to remember that individual perspectives are subjective. We will not tolerate the critique of people (only of ideas), nor name calling, epithets or slurs. Please be respectful of your fellow students and instructors when voicing your opinions.

It is my intent that all students be well served by this course and that your learning needs be addressed both in and out of class. If your needs are not being met, please talk to me or the appropriate resource provider listed at the end of this syllabus.

Scientific Inquiry, Truth, and Terminology in Biology

In physics and mathematics there are proofs, but in biology and the biomedical sciences there is no such thing as proof, only probability. When data on a subject are seemingly "incontrovertible," we often say the concept has been "proven," but what this means is the data are so well vetted and established that the probability of them being untrue is very small. Nevertheless, the beauty of science and scientific inquiry is that as new evidence emerges, established viewpoints may be forced to shift, even for long-held dogmas. Such shifting viewpoints are something I refer to as "evolving truths" given that "truth" in biology is solely based on the body of sound scientific evidence upon which its convictions rest.

On several occasions in this class, we will delve into and evaluate the primary scientific literature. To assist in its evaluation, the use of a schema to classify our current understanding of the field or the specific study being evaluated may be helpful. When I say "proven," what I mean is that there is well-established almost incontrovertible data supporting the claim. Most concepts and studies I will present in class are in this category. When referring to emerging studies or approaches as "promising," the data support the claim but definitive "proof" is missing. Examples of this category would include "unproven" and therefore currently FDA unapproved treatments, such as the use of stem cells or platelet -rich plasma (PRP) for treating of osteoarthritis. Other terms I may use to characterize individual studies include "fuzzy," indicating some data support the claim but there are inconsistencies or contradictory data. "Noisy" denotes that the data are not of sufficient quality (incomplete or insufficient sample size) to make a judgment, but with additional data it might elevate or depress the concept, and finally "nonsensical" means just that, that the subject matter has been studied but, in my opinion, it does not merit further consideration.

As our understanding of a field evolves, so too might the terminology we use to discuss it. For well-established fields, there is historical precedence for the use of specific terms and rhetoric. Such terms/rhetoric may not reflect our current values of equity and inclusivity or sensitivities; for example, medical terminology that only recognizes a binary dichotomy of men and women is antiquated. Just as biological truths evolve, so too does our language. Thus, students need to be cognizant that historical terms that may now seem offensive likely did not carry such connotations in the past. We need to be aware that terms and concepts evolve to reflect our current understanding of the biomedical sciences and humanity and we must strive to use terminology



that best reflects our current sensitivities and proclivities while understanding their historical use and meaning.

Zoom Etiquette (if applicable)

To simulate an in-class-room experience during any synchronous Zoom sessions, one that promotes positive interactions and feedback to the instructor and fellow students, students are strongly encouraged to attend the sessions dressed in classroom attire and to turn on their webcams if they are located in a learning-appropriate environment. To circumvent Zoombombing, synchronous Zoom sessions will be password protected and students will only be allowed to enter through the USC's Blackboard site when displaying their full name as it appears in the class roster (aliases are not permitted). Microphones should be muted unless actively asking questions or involved in discussion. In-meeting chat will likely be enabled but actively monitored for disruptive or inappropriate posts and recorded for further review. Disruptive or inappropriate behavior will not be tolerated and anyone engaging in such behavior shall be removed from the session. Should bandwidth be an issue, try joining with the video from your webcam and use your cellphone for the audio. If you have any questions or concerns about complying with these policies, please email the instructor.

Synchronous Session Recordings

If we are instructed to do so by the administration, all synchronous sessions (save for office hours) will be recorded and posted on Blackboard, typically within a few hours of the session.

Sharing of Course Materials Outside of the Learning Environment is Strictly Prohibited

USC has a strict policy (SCampus Section 11.12[B]) that prohibits sharing of *any* synchronous and asynchronous course content outside of the learning environment. Any student who violates this policy will be prosecuted to the maximum extent allowable by the USC Student Conduct Code, including failure of the course and suspension from the University.

Distribution or use of notes or recordings based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study is a violation of the USC Student Conduct Code. This includes, but is not limited to, providing materials for distribution by services publishing class notes. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the Internet or via any other media. (See Section C.1 Class Notes Policy).

Tentative Course Schedule

Date	Lecture Topic	Marieb <i>et al.</i> (9 th ed.)
May 19	Introduction/ Body Orientation	
May 20	Body Orientation and Gross Anatomy/Embryology	Ch. 1 & 3
May 21	Embryology/Tissues	Ch. 3 & 4
May 22	Tissues/ Integumentary System	Ch. 4 - 5
May 23	Integumentary System/ Bones & The Skeleton	Ch. 5 - 6
May 26	MEMORIAL DAY HOLIDAY	
May 27	Axial and Appendicular Skeleton + Exam 1	Ch. 7 - 8



May 28	Joints & Articulations + Muscular System	Ch. 9 & 10
May 29	The Muscular System/ Skeletal Muscles	Ch. 10 & 11
May 30	Skeletal Muscles	Ch. 11
June 2	The Nervous System + Central Nervous System (CNS) + Exam 2	Ch. 12
June 3	The Central Nervous System (CNS)	Ch. 13
June 4	The Central Nervous System / The Peripheral Nervous System (PNS)	Ch. 13 & 14
June 5	Special Senses	Ch. 16
June 6	Special Senses + The Endocrine System	Ch. 16 & 17
June 9	Endocrine + Blood + Exam 3	Ch. 17 & 18
June 10	The Heart/Blood Vessels	Ch. 19 & 20
June 11	Lymphatic + Respiration Blood Vessels	Ch. 21 & 22
June 12	Digestive System + Urinary System	Ch. 23 & 24
June 13	Urinary System + The Reproductive System	Ch. 24 & 25
June 16	Final Exam – 10:00 a.m noon	

Academic Integrity and Conduct

Students who violate University standards of academic integrity are subject to disciplinary sanctions, including failure of the course and suspension from the University. Given that dishonesty in any form harms not only the individual but other students and the University, academic integrity policies will be strictly enforced. Please familiarize yourself with the Academic Integrity guidelines found in the current SCampus (Student Handbook).

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, "Behavior Violating University Standards" policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on Research and Scholarship Misconduct.

Academic Integrity Violations

Academic dishonesty/misconduct, e.g., plagiarism, cheating, unauthorized collaboration, etc., will not be tolerated. All academic integrity violations will result in a grade sanction and will be reported to the Office for Student Judicial Affairs. It is your responsibility to "reasonably" protect your own work from the plagiarism of others.

If plagiarism is detected on a group project, all members of the group will be held responsible.

You are expected to be familiar with the Academic Integrity guidelines found in the current SCampus. An electronic version is available at http://usc.edu/scampus.



Disruptive and Threatening Student Behavior

Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and the instructor's ability to teach. A student responsible for disruptive behavior may be required to leave class pending discussion and resolution of the problem and may be reported to the Office of Student Judicial Affairs for disciplinary action.

Students and Disability Accommodations:

USC welcomes students with disabilities into all of the University's educational programs. The Office of Student Accessibility Services (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at osas.usc.edu. You may contact OSAS at (213) 740-0776 or via email at osas.rontdesk@usc.edu.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call studenthealth.usc.edu/counseling

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-9355(WELL), press "0" after hours – 24/7 on call

studenthealth.usc.edu/sexual-assault

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office for Equity, Equal Opportunity, and Title IX (EEO-TIX) - (213) 740-5086 eeotix.usc.edu

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298 usc-advocate.symplicity.com/care report

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.



The Office of Student Accessibility Services (OSAS) - (213) 740-0776 osas.usc.edu

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

USC Campus Support and Intervention - (213) 821-4710

campussupport.usc.edu

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity, Equity and Inclusion - (213) 740-2101 diversity.usc.edu

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call dps.usc.edu, emergency.usc.edu

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call dps.usc.edu

Non-emergency assistance or information.

Office of the Ombuds - (213) 821-9556 (UPC) / (323-442-0382 (HSC) ombuds.usc.edu

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

Occupational Therapy Faculty Practice - (323) 442-3340 or otfp@med.usc.edu chan.usc.edu/otfp

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.



HBIO 301L Lab – Human Anatomy Maymester 2025

<u>Lab Instructor:</u> TBA 1:30 – 4:20

pm

Required Text: HBIO 301L Human Anatomy Laboratory Manual

(available at the USC Bookstore)

Week	Day	Lab Topic	Due/Quiz
	Mon 5/19	Introduction and Lab Policies; Lab #1 – Introduction to Anatomage Table & Basic Anatomical Terminology	Meet in PED B7
1	Tue 5/20	Lab #2 – Introduction to Microscopy & Histological Observations	Quiz (Labs #1-2), Lab #1 Assignment
_	Wed 5/21	Lab #3 – Axial Skeleton + Skull Bones; Circulation: Head & Neck	Quiz, Lab Exercises, Lab #2 Assignment
	Thu 5/22	Lab #4 – Appendicular Skeleton; Circulation: Upper Extremity	Quiz, Lab Exercises, Lab #3 Assignment
	Tue 5/27	Review: Histology and All Bones (No Circulation)	Lab #4 Assignment
2	Wed 5/28	PRACTICAL EXAM 1 (Labs #1-4, No Circulation)	
	Thu 5/29	Lab #5 – Axial Muscles; Circulation: Abdomen	Quiz, Lab Exercises
3	Tue 6/3	Lab #6 – Appendicular Muscles, part I: Upper Extremity	Quiz, Lab Exercises, Lab #5 Assignment
	Wed 6/4	Lab #6 – Appendicular Muscles, part II: Lower Extremity Circulation: Lower Extremity	Quiz, Lab Exercises
	Thu 6/5	Review: All Muscles (No Circulation)	Lab #6 Assignment
4	Tue 6/10	PRACTICAL EXAM 2 (Labs #5-6, No Circulation)	
	Wed 6/11	Lab #7 – Porcine Heart & Sheep Brain Dissections; Circulation: Pulmonary & Coronary	Quiz, Lab Exercises

Thu 6/12	PRACTICAL EXAM 3 (Lab #7 + All Circulation)	Lab #7 Assignment

- Labs meet in **PED B7** unless specified otherwise by your Lab Instructor.
- Bring to lab each week: lab manual.
- Lab materials and grades will be posted on **Blackboard** (https://blackboard.usc.edu).
- Quizzes will be administered at the beginning of lab.
- Lab assignments must be submitted electronically through Blackboard (hard copies may also be requested).
- Time reservation is required for use of the Anatomage Table Cloud software a digital signup sheet will be made available.
- Your lab grade constitutes **25**% of your overall course grade. *To be assigned a final letter grade, you must complete 80% of the assigned weekly laboratory activities.* The breakdown is as follows:

Quizzes (7)
 Study Notes (6)
 70 points (7 @ 10 pts each)
 30 points (6 @ 5 pts each)

o Lab Assignments (7) 120 points (1 @ 10 pts, 1 @ 35 pts, 5 @ 15 pts)

o Lab Practicals (3) 240 points (3 @ 80 pts each)

TOTAL: 460 points possible