

ZOOL 2250

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Human Anatomy

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Fall 2017**Course Description**

This course is an introduction to gross, microscopic, and functional anatomy of the human body. Successful completion of all remedial courses is a prerequisite for this course; BIOL 1010/1020 or BIOL 1050 are recommended prerequisites. The lecture and lab are combined into a single grade. While lecture and lab are related, the material covered in each may differ in content and/or focus.

It is presumed that you have a fundamental understanding of biology from previous courses. If not, you should review cell structure and function (one of the first chapters in most anatomy texts).

Course Objectives

- Understand the organization of the human body, the major features and interrelationships of the organ systems, and the relationship of structure and function
- Visualize the internal anatomy, both gross and microscopic, and relate this to surface features
- Understand lectures, texts, articles, and/or clinical demonstrations in subsequent classes
- Develop care in verbal expression, especially the precise use of terminology
- Understand the biological significance of animal structure

Required Texts/Materials

- Jones, T. D. *Laboratory Manual for Human Anatomy*, Fall 2017-Summer 2018 (available on the course Blackboard page; it is recommended that you have it printed at FedEx, 1451 Geer Rd)
- Instructor's Advanced Dissection Kit (SB12625M). NascoWest.
- Gloves (nitrile gloves, rather than latex, are recommended)

Recommended Texts/Materials

- OpenStax. *Anatomy and Physiology*, OpenStaxCNX (available at no cost in web view or PDF or at low-cost print, Kindle or IBook versions at CNX.org) or other college Human Anatomy or Human A&P text.
- Kreiger, P. A. 2017. *A Visual Analogy Guide to Human Anatomy*, 4e. Morton.
- Sebastiani, A. M. and D. W. Fishbeck. 2005. *Mammalian Anatomy: The Cat*, 2e. Morton.
- Lab coat or old shirt

Course Information and Communication

Information for the course (syllabus and other relevant material) can be found on Blackboard (blackboard.csustan.edu). Communication regarding the course will be done via Blackboard or email; it is your responsibility to check the course Blackboard page and your university email account regularly.

If you need to contact one of us, it is best to use email rather than telephone. Before emailing (or calling), re-read this syllabus; answers to the majority of questions we receive are here.

Lectures

Lectures are organized with the presumption that you have at least scanned the material in the text related to the topic before class (see Tips for Success). Slides are used to supplement the lecture and generally illustrate some aspect of human anatomy (and give students something to look at besides me). Lecture slides generally are images with few words; you are expected to take notes on what is said. If you feel I am covering the material too fast, feel free to stop me by asking questions about the material. Because texts may vary

among students and images may come from a variety of sources, the lecture slides will be available on the course Blackboard page. It is recommended that you print the slides prior to class, look over the slides with your textbook, and use the slide pages for taking notes.

During the course of each lecture, students will be called on to answer a question or explain a subject. Students may be called randomly or because they are clearly not attentive. These questions are intended to help student focus and be prepared for exams.

Labs

Labs are designed to allow students to actively interact with materials that aid in a more complete understanding of anatomy (e.g., microscopic slides, models, and dissection materials). The lab manual is written as a guide for you to follow to better understand human anatomy and as such it is imperative that you carefully read and follow the lab manual. You must bring a hard copy of the lab manual to every lab. If you do not bring a printed manual to lab, you will be asked to leave.

Dissection is a required component of this course. Students who do not actively participate in dissection will earn a failing grade (F) regardless of the points earned on exams or quizzes.

Lab Safety

Each student must watch the tutorial on the BioLab Safety course on Blackboard and pass the quiz with 100% correct. Failure to meet this requirement by 8:00 am Friday, 02 February will result in disenrollment from the course.

Open Lab

The anatomy lab (N224) will be available for study/review from 9:00 am -3:00 pm on the dates listed in the Class Schedule. It is highly recommended that you make use of this time. However, inappropriate use of the lab or destruction/loss of lab materials during open lab will result in cancellation of this privilege for the duration of the term for all students.

Exams and Quizzes

Exams are written with the course objectives in mind. The questions will be written in technical and standard English (like the text and lab manual). Because the information in this course cannot be divided into discreet units, exams are cumulative to some extent. Unless otherwise stated, exams will begin at the beginning of the scheduled class time. Exam scores will be posted on the course Blackboard page after they are graded.

Anatomical knowledge is demonstrated when you can identify a specific structure or when you can accurately describe a particular structure. Accordingly, this will be the basis for both lecture and lab exams. Correct spelling and good penmanship is necessary for effective communication and poor spelling or poor penmanship is a sign of intellectual immaturity and carelessness. Therefore, spelling errors will result in lost points and illegible answers will receive no credit.

Don't put off reviewing for exams; start well before the deadlines approach. It is best to start studying for the first (and final) exam on the first day of class. See the Course Schedule for exam dates and Tips for Success for suggestions on studying, etc.

Lecture Exams (500 points)

There will be 3 lecture exams (100 points each) and a cumulative final exam (200 points); see Course Schedule for dates. An exam form will be supplied; you only need bring a pen or pencil.

No exams will be handed out after the exam has begun. If you are late, you will not be able to take the exam and you will earn a zero for that exam. You may not leave during exams; take care of necessary business beforehand. There are no makeup or early lecture exams. If you must miss a lecture exam and the absence is

excused, it will be replaced by the final exam percentage. Subsequent missed exams will earn no points and cannot be replaced regardless of the reason for the absence

Lecture exams will focus on material covered in lecture, but overlap with material in lab. All topics covered in lecture are important to understand human anatomy and thus exam questions will randomly survey the material presented in lecture. The final exam will cover material from the entire term (previous questions will not be purposefully re-used).

Exam questions will be fill-in-the-blank or short answer; this is not grade school and there will not be a word bank. 1 point will be deducted for every two spelling errors. Incorrect use of plural or singular forms will not be counted as spelling errors, but errors in which another word is spelled correctly will be marked wrong (e.g., humorous instead of humerus). Illegible answers will not be graded and will earn zero points. Exams will not be returned, but you may look over the exam during office hours. You will have one week after exams have been returned to dispute your scores; after that, no scores will be changed.

Lab Practical Exams (350 points)

There will be four lab practical exams (see Course Schedule); approximately 50-60% of the last one will be cumulative. Anything included in the lab manual (unless specifically omitted) may be included on these exams. As a way of testing your understanding, practical exams may include unknowns (i.e., material that you may not have not seen in lab). A practical exam form will be supplied; you only need bring a pen or pencil (you may also want to bring gloves and a probe).

For each practical exam, there will be 2 questions at each station; each question will be worth 1 point. You will have 90-seconds to answer the questions at each station. After 90 seconds, you will be instructed to move to the next station in sequence. When you have been to each station, you will have 2 minutes to go back to 2 or 3 stations. Spelling errors will result in lost points. Incorrect use of plural or singular forms will not be counted as errors, but errors in which another word is spelled correctly (e.g., humorous instead of humerus, ileum instead of ilium) will be marked wrong and not as a spelling error. Images of each station will be posted on Blackboard after the practicals have been completed. Missed practical exams cannot made-up.

Students must sign-up online for a time to take each lab exam (information will be given on blackboard). Sign-ups will be made available at least one week prior to the exam. Students will not be allowed to enter once the practical exam has begun. There no make-up lab practical exams given. If a lab practical exam is missed and the absence is excused, the score (percentage) of the lowest practical exam will replace the missed practical. Subsequent missed exams will earn no points and cannot be replaced.

Lab Quizzes (50 points)

Before leaving lab, you and your lab partner will be given a verbal quiz over the day's material; anything in the lab manual (unless specifically omitted) may be included in the quiz. The quiz will consist of 2 questions. You will earn 1 point for taking the quiz and 1 point for each correct answer; a total of 3 points are available each day (42 total points for the semester). An additional 8 points can be earned by returning the plastic cat tag after the last day of lab.

Quizzes will be given at random during the last 45 minutes of lab. Students who do not attend lab from the beginning will not be able to earn quiz points. Students who leave without taking a quiz will earn no points. Quizzes cannot be made up.

Attendance

Regular attendance in lecture and lab are vital to your success in this course (see Tips for Success). You are expected to attend regularly, come to class on time, and stay until the end of the lecture or lab period. Attendance requires your physical presence as well as your attention and active participation. Absences, inattentiveness, lack of participation, etc. will have a direct effect on test scores and may be considered when

course grades are determined. See the *Exams and Quizzes* section of the syllabus regarding absences in those cases.

Recording Policy

The use of audio and/or video recorders or cameras (including cell phone cameras) is not permitted during lecture or lab; including taking pictures of materials (models, specimens, microscopic images, etc.) in lab. An exception is made for students who are registered with Disability Resource Services and specifically approved for this accommodation. If you do not intend to comply with this policy, please disenroll from this class.

Students with Disabilities

Students with documented disabilities need to make an appointment with the instructor as soon as possible to discuss course adaptations and/or accommodations. If you have an undocumented disability, contact Student Support Services.

Personal Integrity

Behavior that interferes with the instructor's ability to teach or the ability of students to benefit from instruction will not be tolerated. Such behaviors will be dealt with as severely as university regulations allow. Behavior that is not consistent with the Student Conduct Code—including any form of academic dishonesty—will result in immediate expulsion from the course, a failing grade, and the matter will be referred to the Office of Student Judicial Affairs.

Grading

Only letter grades can be earned for this course; CR/NC grades are not available.

Your grade will be determined by your combined performance in lecture and lab. All scores earned during the semester will be posted on the course Blackboard page. At the end of the term, you may access your course grade from my.csustan.edu. Scores and/or grades will not be given out via e-mail or phone.

Dissection is a necessary component to the lab. Students who do not actively participate in dissection will receive a failing grade (F) for the course regardless of the number of points earned during the semester.

A total of 900 points are available (500 from lecture exams and 400 from lab practical exams and quizzes); there will be no other points or assignments available beyond those mentioned herein. Letter grades will be assigned as follows:

A	≥ 765 points (85%)
B	≥ 675 points (75%)
C	≥ 540 points (60%)
D	≥ 450 points (50%)
F	< 450 points (or lack of active participation in dissection)
WU	< 450 points and one or more exam absences including the final

The use of +/- grades is at the instructors' discretion. Grades will not be changed once assigned except if errors in grade calculations occurred.

Historically, most student scores have not increased significantly after the first exam or practical. If your scores on the first exam and practical are below the percentage for the grade you hope to achieve, you should consider your continued enrollment or making drastic changes to your approach to this course.

Course Drop and Withdrawal Policy

The policies for this course are the same as the university policies: "...dropping courses after the Enrollment Census Date will not be allowed. After the Enrollment Census Date, students are responsible for completion of the course(s) in which they are enrolled...Withdrawals after the Enrollment Census Date and prior to the

last twenty percent of instruction may be assigned only for serious and compelling reasons.” 21 February is the Enrollment Census Date.

Implied Contract

This syllabus serves as a contract between you and the instructor. Your continued enrollment in this class denotes your understanding of, and agreement with, the material herein. You are expected to print this syllabus, read it carefully, and keep it in your notebook to refer to during the term.

Tips for Success

Students often ask what they should do to be successful in this course, I invariably answer with the following:

- Don't waste time making flashcards and highlighting—these are inefficient and ineffective practices.
- Remember that this is a college course and techniques that worked in high school are unlikely to be effective.
- Schedule a minimum of 6 hours/week outside of class for preview and review of materials.
- Read the relevant material before lecture and lab (see course schedule) so that you are familiar with terms and concepts.
- Attend and actively participate in lecture and lab.
- Take good notes in lecture. Write down the ideas discussed. Don't try to write every word said or just copy the text that may be on the slide. Use abbreviations.
- Take notes using a pen or pencil, not a keyboard.
- As soon after class as possible write down what you can recall from lecture. Compare this with your notes to discover what you don't know.
- Re-write or type (don't just re-copy) your lecture notes as soon after the lecture as possible. Use your own words. Integrate information from texts and lecture. Store your notes in the cloud so you can access them anytime and anywhere.
- Don't study for the exam; study for a much more difficult. If the level of your knowledge exceeds the exam, you are guaranteed to do well.
- When there are topics you don't understand, refer to your texts for clarification and if that doesn't work, mark the section in your notes and ask as soon as possible.
- Review your lecture notes daily starting with the current topics and weekly starting from the first page and going to the last page. Make corrections or additions as needed to increase clarity or completeness.
- Write summaries. Take a topic and write what you know, then compare that to your notes to find out what you don't know.
- Limit study sessions to no more than one hour; many short (10- to 30-minute) sessions are more useful than fewer long ones. Take short breaks between sessions.
- If you encounter words that are unfamiliar, look them up in the index and glossary in the text or a dictionary as soon as possible; the word roots in the back of the lab manual are also helpful in understanding terms.
- When working in the lab, refer only to the lab manual; if you are confused or the text is unclear, reread the section. Students often think that pictures are necessary to accurately dissect and identify structures: this is incorrect. Reading and following instructions gives context and understanding that cannot be gleaned from images.
- Re-read the manual when reviewing outside of lab. When doing so, try to envision the material. If you cannot, use supplemental materials and images to help and then return to the lab manual.
- Review weekly with other students who are also taking the time to study and review.

Following these tips will allow you to learn more easily and more efficiently. Effective study habits will also make you more confident about your understanding, which translates into higher exam scores. Of course, choosing to do otherwise has the opposite effect.

COURSE SCHEDULE¹

LECTURE			LAB				
DATE	TOPIC	CHAPTER (SECTION)	DATE	TOPIC	CHAPTER (PAGES)		
26 Jan	Introduction	1 (1, 2, 6) ²					
29 Jan	Tissues	4	29-31 Jan	Tissues (Epithelium, Muscle)	2 (14-39)		
31 Jan							
02 Feb				<i>Open Lab</i>			
05 Feb	Skeletal	6 (1-5), 9 (1-5)	05-07 Feb	Tissues (Connective, Nervous)	2 (14-39)		
07 Feb							
09 Feb				Practical 1 (50 points)			
12 Feb				12-14 Feb	Skeleton (Microanatomy & Axial)	3 (40-54)	
14 Feb			Exam 1 (100 points)		16 Feb	<i>Open Lab</i>	
16 Feb	Muscular	10 (1-6), 11 (1)	16 Feb	<i>Open Lab</i>			
19 Feb				19-21 Feb	Skeleton (Appendicular & Articulations)	3 (54-70)	
21 Feb ³				23 Feb	<i>Open Lab</i>		
23 Feb				26-28 Feb	Muscles (Forelimb & Trunk)	4 (81-93)	
26 Feb	Circulatory	19 (1-3), 20 (1-2), 21 (1)	02 Mar	<i>Open Lab</i>			
28 Feb				05-07 Mar	Muscles (Hindlimb)	4 (71-81)	
02 Mar				09 Mar	<i>Open Lab</i>		
05 Mar				12-14 Mar	Muscles (Actions)	4 (71-93)	
07 Mar				16 Mar	Practical 2 (100 points)		
09 Mar	Exam 2 (100 points)		19-21 Mar	Circulatory (Heart)	5 (94-103)		
12 Mar	Respiratory	22 (1-3, 6)	23 Mar	<i>Open Lab</i>			
14 Mar				26-28 Mar	Circulatory (Vessels)/ Respiratory	5 (103-111), 6 (112-122)	
16 Mar				30 Mar	<i>Cesar Chavez Day (Campus Closed)</i>		
19 Mar	Digestive	23 (1-7)	09-11 Apr	Digestive	6 (122-129)		
21 Mar				13 Apr	<i>Open Lab</i>		
23 Mar	Urinary	25 (2-4, 9)	16-18 Apr	Urinary	7 (130-133)		
26 Mar				20 Apr	<i>Open Lab</i>		
28 Mar	<i>Cesar Chavez Day (Campus Closed)</i>		23-25 Apr	Reproductive	7 (133-138)		
30 Mar	<i>Cesar Chavez Day (Campus Closed)</i>		27 Apr	Practical 3 (100 points)			
09 Apr	Urinary		30 Apr-02 May	Nervous (CNS)	8 (139-153)		
11 Apr				04 May	<i>Open Lab</i>		
13 Apr	Exam 3 (100 points)		07-09 May	Nervous (PNS, Special Senses)	8 (153-165)		
16 Apr	Reproductive	27 (1-3)	11 May	<i>Open lab (Closed at noon)</i>			
18 Apr				14-15 May	Practical 4 (100 points)		
20 Apr				18 May	Final Exam (200 points; P 166, 8:30-10:30)		
23 Apr							
25 Apr	Nervous	12 (1-3, 5), 13, 14, 15 (1-3)					
27 Apr							
30 Apr							
02 May	Integumentary	5 (1-3); Manual 9					
04 May							
07 May	Human Biology	Manual 10					
09 May							
11 May							
14 May							
16 May							
18 May							

¹ Note that the lecture schedule is tentative and will likely change, but it will follow the same sequence. The lab schedule and exam/practical dates will only be changed if the instructors deem it necessary.

² You should have read the *Preface* and *Chapter 1: Introduction to Human Anatomy* in the Lab Manual prior to the first lab as it is presumed that you have a clear understanding of that material before the semester begins.

³ Enrollment Census Day (last day to drop courses).