

Utah State University-Eastern

HUMAN ANATOMY (BIO 2320)

Spring 2021; 4 Credit-Hour Course

Lecture: MWF 9:30am to 10:20am (CIB Rm #101)

Lab: Tues: 9:00-10:50, 1:30-3:20pm, or 5:15-7:05pm (RVS Rm #234)

Instructor:

Tyson D. Chappell PhD.

Email:

tyson.chappell@usu.edu

Office:

Reeves #261

Office Phone: 613-5345 or Science Secretary 613-5316

Office Hours: I will typically be available to talk immediately after class MWF or email/call for questions.

Course Description:

This course focuses on the **structure** and some basic functions of the human body. It is laboratory intensive which will include animal dissections and human cadaver examination. Students will learn the structure of many major systems through study and observation of human and animal specimens. Students are expected to spend a **significant** portion of their time outside of class in studying and memorizing the large amount of information that will be presented each day in lab and lecture.

This course is **required** for nursing students, and is **recommended** for students in pre-med, pre-dental, pre-veterinary, and other allied health pre-professional programs. Students taking the course must enroll in both lecture and laboratory.

First, some philosophy. If you are going into Nursing, Medicine, Pharmacy, Physical Therapy, Dentistry, etc, when do you think you are supposed to learn about human anatomy? What do you think is the purpose of this class? Do you think that once you are in your programs that your instructors THEN are going to go through all the details of anatomy with you? Once you are in your health field programs you ALREADY need to have a good understanding of anatomy. NOW is the time to build your anatomy foundation which you will need to already have established for your futures in the health care fields.

Finally, this course is difficult, and you will need to learn a LOT. Would you really want it any other way? When you, or your family, or friends are being cared for due to health problems do you want the doctors and nurses to be as knowledgeable and highly trained as possible? To properly care for people and save their lives it will take your sacrifice to succeed and gain this information. **This class, as well as physiology, can, will, and should separate those that truly want to be in the healthcare field and have a very good job for the rest of their lives vs others who don't want to do what it takes to succeed.**

Pre-requisites:

This is not a general-education course. There are no pre-requisites. *But Biology 1500 or 1010 is **highly** recommended.*

Course fees:

\$30. These fees help cover costs for the cadavers use fee, fetal pigs, preservative liquids, gloves, and masks.

Textbook and Supplies (many options available):

1. (Required): Customized by Chappell: **Human Anatomy 5th edition; Author: McKinley, O'Loughlin; Publisher: McGraw-Hill; Benjamin, Cummings; Color customized edition ISBN= 978-1307028942.**

2. (Optional): Anatomy and Physiology Revealed 3.0: An Interactive Cadaver Dissection Experience; McGraw-Hill Higher Education. On-line edition. To purchase a two year online subscription visit <http://www.mhhe.com/sem/apr3/> click "student access" and follow instructions. Price is ~\$43.50. The software is also helpful for Physiology. The bookstore also has DVDs of this program to purchase.

3. A great book that is FREE to use as a reference to our course book (along with the numerous anatomy books on reserve in the library) can be found here: <https://openstaxcollege.org/textbooks/anatomy-and-physiology/get>. You could even donate just a few bucks as an incentive for more free books to be made available to everyone.

Course Objectives:

Because of their complexity, certain systems require more time to address in both lecture and laboratory. Less complex systems are addressed in only during the lecture. At the end of the semester, students will more fully understand and will have obtained:

1. **Significant factual knowledge regarding human anatomy and some physiology**
2. **To develop specific skills, competencies, and points of view needed by professionals in the field most closely related to this course.**
3. **How to find and use resources for answering questions or solving problems**
4. Learn the regional body terms, directions, body cavities.
5. Identify the major tissue types and their general function.
6. Learn all the major and many of the minor bones as well as the bones' unique characteristics
7. Learn the different types of articulations
8. Know all major and many minor muscles of the body.
9. Understand the identifying landmarks of the surface anatomy to "see" structures below the skin.
10. Learn the structure and function of the nervous system, from cells to large nuclei and cerebral lobes, to cranial nerves.
11. The main organs and many of the hormones related to the Endocrine system
12. Detailed info relating to the heart and major vessels entering and leaving the heart
13. The basic cells and cell functions as well as the major organs that all make of the Lymphatic system
14. Major and minor structures of the respiratory system
15. Major organs and structures of the digestive system
16. Major organs and structures of the urinary system
17. Understand the detailed information relating to the structure of the reproductive system and fetal development of reproductive organs

Required Student Skills:

Ability to take notes, follow directions, attend class PROMPTLY, and respond to a lecture teaching method consisting of white-board discussion and multimedia presentations. You will also have several previously recorded videos of my lectures and demos to view before certain classes. This approach is called a "flipped classroom" teaching method. It requires that students are prepared BEFORE certain classes take place in order to have some knowledge and exposure of a subject prior to classroom discussion. Some entire courses use this approach. This

semester there will be a small percentage of the flipped classroom pedagogy (the science behind HOW to teach).

Student Assistance:

I will be using Canvas for the management of this class. All reserve materials, including my power point lectures, the syllabus, class schedule, and updated grade sheets, will be available through Canvas. To access Canvas, go to the web address: <https://usu.instructure.com/login> . Student "A numbers" and password will be required to login. Privacy is your responsibility. You will be responsible for every email and quiz submitted under your name. You will also be held accountable for every email I send through Canvas. You will want to check Canvas regularly. Canvas has many useful features (your assignment scores, student study resources, animations, etc.) and you should take the time to explore them from within our course page. You may also contact Debbie Pearson if you have trouble logging on or questions regarding use 613-5716 debbie.pearson@usu.edu

Also, there will be tutors that are typically not used by students until the student is failing and then they finally realize the importance and helpful nature of tutors. The tutors are excited to help you. You need to be excited about having such wonderful tutors to help you as well.

Kaltura will be used to record each lecture. Kaltura is meant to be used as a backup in case of emergency or should the covid situation change and to review material for exams. Zoom will also be available, but I strongly suggest you attend class in person as frequently as possible.

Laboratory:

Lab time will be mostly spent in reviewing: histology, bones, muscles, brains, hearts, watching anatomy videos, or studying the textbook and class notes.

Due to COVID there will likely be a sign up sheet in order to use the lab outside of your regular lab times. Room occupancy in either the lab or cadaver room will limit the numbers of people able to use these areas. When signing up, be considerate to how many hour slots you sign up to use. Also, if you sign up for a time, please honor that commitment and attend lab to study unless an extreme circumstance arises.

5 points are earned for each lab you participate in fully. This means showing up before lab starts and staying until class is over, or I dismiss everyone. Anything less and it is a 0/5 for that lab. If you miss a lab or cannot attend your lab, you can ask permission to attend one of the other labs that day. Lab points can not be made up unless it is an extreme reason.

***Your final grade for both the laboratory and lecture sessions will be determined from a **combination of points** earned in wet lab exams and computer exams. Use your lab time wisely to learn and understand the anatomy needed to excel in this class.

No food or drink is allowed during lab/dissection days. For protection, students must wear suitable clothing, safety glasses and gloves during specimen observation.

Exams:

Exams will include material from lecture notes, class discussions, and material found in the textbook. There will be **8 exams, none of which are comprehensive**. Some exams will have wet lab components that will be taken in our lab, while the remainder of the exams will be taken in the computer testing center. Check syllabus schedule below

for exam dates. You will be responsible to schedule your exam time with the testing center. Exams are worth **150 points** (~66% computer and ~33% wet lab when applicable). Wet lab exams **CAN NOT** be taken early nor late, rather only the day and time scheduled below.

Your lowest exam score is dropped as each exam is taken.

You must bring picture identification to be admitted for the exam if taken at the campus testing center.

In the testing center or on Proctorio, ALL exams are CLOSED book, No notes, No friends, No cell phones, only one webpage should be open. In the testing center you may ask for a blank sheet of paper to write on during the exam but the entire sheet **must** be returned to the testing center help prior to you leaving.

Testing center hours of operation:

Mon to TH: ~8:30pm to 8:30pm (last test distributed at 8pm).

Friday: 8:30am to 5:30pm (last test distributed at 5pm).

Assignments:

Assignments will be due for every chapter. These assignments will be accessible on canvas and will be open book. You should be able to complete these from any electronic device (**Cell phones have a much higher chance of giving trouble though. Be advised**). Assignments are meant to help you study, learn, and review the material to prepare you for exams. Exam questions will be similar, although not necessarily identical to the assignments. Assignments will have 20 questions to answer. Each correct question is worth $\frac{1}{2}$ a point for a total of 10 points if turned in on time or 5 point maximum for turning it in 1 day late (each answer worth $\frac{1}{4}$ point). You do NOT need to finish the entire assignment in one sitting. Opening an assignment, answering a few questions and then closing your browser will save your answers when you come back to it. However, if you have an assignment open for many days, sometimes Canvas will cause it to be submitted before you have completed all the answers. Assignments are meant to motivate you to study and learn the material. Completing the reproductive assignment can take the place of a missing or low scoring assignment.

Each chapter also has questions at the end that you can answer if you'd like additional questions to test your knowledge. Answers found in back of book.

Pay attention to Canvas' calendar (set up the calendar to remind you when exams or assignments are due) as well as at the end of this syllabus for each assignment's due date. I will not remind you every day when these are due. As with most things in the course, YOU must be responsible for your own success or failure. These assignments can help you with your final grade IF you complete all of them and earn ALL of your points.

After submitting the assignment your score will be shown along with your answers. If you truly want to learn the material, immediately after completing the assignment you should go back through the assignment and figure out the correct answer to the ones you missed. The assignments are supposed to support your learning process.

ALL assignments are due by 9:30 AM on their respective due dates.

Your lowest assignment score is dropped.

Classroom Policies:

Face coverings must be worn by students, faculty, staff, and visitors, in USU buildings and facilities, as well as outside where social distancing measures (at least a 6-foot distance) are difficult to maintain.

Cheating – Cheating in any form will not be tolerated. *Cheating* on any exam will result in you earning an *F grade on the exam and possibly even in the course*. No exceptions. BE AWARE. If you **need paper to write anything down on, it must be requested of the testing center helpers and that paper must be turned back in prior to you leaving the center**. Do not throw it away, give it to the helpers to dispose of. Absolutely NO cell phone use or any other electronic aids are permitted. Finally, do not access ANY webpage except the page for the exam.

Attendance – Class attendance (**PHYSICALLY AND MENTALLY**) is your responsibility. However, it has been shown that students who attend classes regularly AND PAY ATTENTION have a higher grade than those who do not. I do mind tardy behavior. Please do not come to class late, it is disruptive for those who arrive on time. Missing class will also cause you to miss out on random extra credit for attendance made available for those that show up on time to class.

The amount of material covered every lecture and lab is significant. I advise you, missing any class, or leaving early is not going to help you learn the information any better. We will be covering huge amounts of information and you must be prepared prior to each class by having **already read that day's material ahead of time** otherwise you may become swamped with new material and lost very easily.

Class Courtesy – I reserve the right to remove any student from my class that may be disruptive or hinder the educational progression of any other student. Please be courteous to other students and **turn off cell phones** during class. Please turn off the keyboard “clicks” to your tablet devices. Finally, avoid being a distraction to other students. You DO NOT have the right to disrupt another student's pursuit of knowledge.

Student Support Services (SSS)/Accommodations for Students with Disabilities:

If a student has a disability that qualifies under the Americans with Disabilities Act (ADA) and requires accommodations, he/she should contact the Disability Resource Center for information on appropriate policies and procedures. Disabilities covered by ADA may include learning, psychiatric, physical disabilities, or chronic health disorders. Students can contact DRC if they are not certain whether a medical condition/disability qualifies. You may contact the DRC by phone (435)613-5337, email karl.burnside@usu.edu or visit the office located at JLSC 223.

Student counseling services are also available in the Office of Student Success. Please contact Darrin Brandt by phone (435)613-5670 or email at darrin.brandt@usu.edu to set up an appointment. This is a free service to USU Eastern students.

Grade-Determination Method:

Total points are distributed as follows:

| | |
|------------------------------------------------------------------------------------------|-------------------|
| Seven exams @ 150 (lab + lecture) points each | 1050 pts. |
| 16 chapter assignments: 10 points each | 160 pts |
| Active participation in Fetal Pig dissection followed by in class mini quiz | 20 pts |
| Lab participation points @ 5pts per lab..... | ~60 |
| Total Points... | ~1300 pts. |

To receive a B or an A grade, you will need to spend the appropriate amount of focused study outside of class e.g.

each credit should merit 3 hours of studying outside of class. Ergo, a 4 credit class should find you studying at least 12+ hours outside of class each week to attain an A or B. If this amount of studying is not adequately assisting you in earning the grade that you desire, perhaps additional time may be required as well as serious reflection on your study habits.

DO NOT ASK FOR EXTRA CREDIT THROUGHOUT THE SEMESTER AND DEFINITELY DON'T ASK FOR IT AT THE END OF THE SEMESTER EVEN IF YOU NEED JUST A FEW MORE POINTS ON YOUR GRADE.

Every day, every hour, every exam is important. Work for your grade. Work to understand and learn the material. It is all on you. Your education, your life, your drive, your reward.

In addition, +5 points will be given to students that fill out their online student evaluation form for this course. You will need to **print off the last page of the evaluation that indicates the completion of the course evaluation. Turn this printed page into me immediately afterwards.** An additional +5 points will be given to all if 80% of the class also fills out the student evaluation form. Details will be coming in several weeks. When filling out the course evaluation, please pay extra attention to your feelings regarding the course objectives as mentioned above in bold highlights. Thank you.

Grading Scale:

The total points obtained by each student will be turned into a letter grade. The grading scale is:

- A** (94% -100%), **A-** (90% - 93%)
- B+** (86% - 89%), **B** (83% - 85%), **B-** (80% -82%)
- C+** (76% - 79%), **C** (73% - 75%) , **C-** (70% - 72%),
- D+** (66% - 69%), **D** (60% - 65%),
- F** (those at or below 59%)

Those students who score less than 60% on the first exam **should seek tutoring, ask me for more help before an exam, or drop the class.**

A reminder: NOW is the time, HERE is the place to prepare for your future in the health care field. Anatomy and physiology are supposed to be weeder courses for the healthcare field. If you are unwilling to work hard NOW to LEARN this material, it is very possible that you do not deserve to go into the healthcare field. Think about that. Ask other healthcare instructors and those currently in the healthcare field for their opinions as it relates to the benefits of a very good anatomy understanding in their preparation for the healthcare field.

Final word on your final grade, my job is very easy when the final exam is over. Your final grade will directly reflect the grade you **EARNED**. Some students will miss a higher grade by only a few points. Your grade is **YOUR grade**. I will spend the entire semester trying to help you learn the material and earn all the points you can. The standard for your grade is the points that you have accrued, no more, no less.

Please, leave any seriously flawed misconceptions and logical fallacies regarding your grade entitlement at the door. You are not buying a grade at Utah State University-Eastern. You are paying to prove yourself in order to EARN your grade. You do not pay a gym membership in order to buy muscle and strength. You pay for the opportunity to prove yourself worthy to have the muscle and strength by sweating and EARNING it. Paying the monthly fee won't be enough, even showing up to the gym won't be enough, but actually WORKING OUT with INTENSITY is how you will become stronger.

The instructor reserves the right to alter the grade-determination method if necessary.

Anatomy 2320; Spring 2021:

| Week | Day | Date | Text Chptr | Topic/text book pages | Notes/Exams/Assignments |
|------|-----|--------|------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | M | 18-Jan | | Martin Luther King, Jr. Day | |
| | T | 19-Jan | 1 | Syllabus. CH 1. Look in canvas lecture notes for lecture. | Reminder about purge process: If you don't pay in time, you'll be removed from the course. |
| | W | 20-Jan | 1, 4 | Finish CH1 | Review Chapter 1 and finish lecturing on any sections you have questions about. |
| | TH | 21-Jan | | | |
| | F | 22-Jan | 4 | Tissue | |
| | Sat | 23-Jan | | | |
| | Sun | 24-Jan | | | |
| 2 | M | 25-Jan | | | |
| | T | 26-Jan | 4 | Start examining Histology together in class. All from Michigan State histology site. Show Cadaver | Watch my panopto demo for histology BEFORE lab on Tuesday. I'll show additional examples of requested tissue. Look under CH4 notes in canvas. |
| | W | 27-Jan | 4 | Tissue | |
| | TH | 28-Jan | | | |
| | F | 29-Jan | 4 | Tissue | You must be paid up fully by TODAY to prevent your purge! |
| | Sat | 30-Jan | | | |
| | Sun | 31-Jan | | | |
| 3 | M | 1-Feb | 7 | Short review for exam 1. Axial Skeleton | Exam #1; text book CH 1, 4. Feb 1-3. DUE: Assign #1, 2 |
| | T | 2-Feb | 7 | Axial Bone Review: | Bring lecture notes to identify bones |
| | W | 3-Feb | 7 | Axial Skeleton | |
| | TH | 4-Feb | | | |
| | F | 5-Feb | 8 | Axial and Appendicular skeleton | |
| | Sat | 6-Feb | | | |
| | Sun | 7-Feb | | | |
| 4 | M | 8-Feb | 8 | Appendicular skeleton | Last day to drop without "W." |
| | T | 9-Feb | | Appendicular Bone Review: | Bring lecture notes to identify bones |
| | W | 10-Feb | 9 | Append and Articulations | |
| | TH | 11-Feb | | | |
| | F | 12-Feb | 9, 11 | Articulations (first half of chapter primarily) | |
| | Sat | 13-Feb | | | |
| | Sun | 14-Feb | | | |
| 5 | M | 15-Feb | 11 | President's day | Lab prep: Watch Kaltura video for Axial skeleton |
| | T | 16-Feb | | Bone lab exam (pts go towards exam#2). Axial Cadaver muscle Review | Exam 2 computer: Feb 16 to 18 th . Assignment 3, 4, 5 due 9:30am |
| | W | 17-Feb | 11 | Axial Musculature | |
| | TH | 18-Feb | | | |

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|----|-----|--------|-----------|-------------------------------------------------------------|-----------------------------------------------------------------|
| | F | 19-Feb | 11, 12 | Axial & Appendicular Musculature | |
| | Sat | 20-Feb | | | |
| | Sun | 21-Feb | | | |
| 6 | M | 22-Feb | 12 | Append muscle | |
| | T | 23-Feb | | Appendicular Cadaver muscle review | |
| | W | 24-Feb | 12 | Append muscle | |
| | TH | 25-Feb | | | |
| | F | 26-Feb | 13 | Surface Anatomy | |
| | Sat | 27-Feb | | | |
| | Sun | 28-Feb | | | |
| 7 | M | 1-Mar | 13 | Surface Anatomy | Exam #3; text book CH 11-13; Mar 1-4. Due: Assign 6, 7, 8 |
| | T | 2-Mar | 14 | Muscle lab exam (pts go towards exam#3); Lecture if needed. | Prep for Exam 3 computer portion with remaining lab time |
| | W | 3-Mar | 14 | Neural Tissue | |
| | TH | 4-Mar | | | |
| | F | 5-Mar | 14 | Neural Tissue | |
| | Sat | 6-Mar | | | |
| | Sun | 7-Mar | | | |
| 8 | M | 8-Mar | 15 | Brain and Cranial nerves | |
| | T | 9-Mar | | Brain Review | Watch Panopto Brain demo video for the details |
| | W | 10-Mar | 15 | Brain and Cranial nerves | |
| | TH | 11-Mar | | | |
| | F | 12-Mar | | No Class Day | |
| | Sat | 13-Mar | | | |
| | Sun | 14-Mar | | | |
| 9 | M | 15-Mar | 15 | Brain and Cranial nerves | |
| | T | 16-Mar | | Brain Review | |
| | W | 17-Mar | 15 | Brain and Cranial nerves | Exam #4; text book CH 14-15; Mar 17 to 22. Due: Assign 9, 10 |
| | TH | 18-Mar | | | |
| | F | 19-Mar | 20 | Endocrine | |
| | Sat | 20-Mar | | | |
| | Sun | 21-Mar | | | |
| 10 | M | 22-Mar | 20 | Endocrine | |
| | T | 23-Mar | | Wet Brain Exam (pt of Exam #4). Heart review | |
| | W | 24-Mar | 20 | Endocrine | Last day to drop the class. |
| | TH | 25-Mar | | | |
| | F | 26-Mar | 22 | The Heart | |
| | Sat | 27-Mar | | | |
| | Sun | 28-Mar | | | |
| 11 | M | 29-Mar | 22 | The Heart | |
| | T | 30-Mar | | Heart Review | |

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|----|-----|--------|-----------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| | W | 31-Mar | 22 | The Heart | Exam #5 computer. CH 20, 22. Mar 31 to Apr 5 Due: Assign 11, 12 |
| | TH | 1-Apr | | | |
| | F | 2-Apr | 24 | Lymphatic | |
| | Sat | 3-Apr | | | |
| | Sun | 4-Apr | | | |
| 12 | M | 5-Apr | 24 | Lymphatic | |
| | T | 6-Apr | | Wet heart exam for Exam #5 | |
| | W | 7-Apr | 24, 25 | Lymphatic. Respiratory system | |
| | TH | 8-Apr | 25 | Friday Schedule Respiratory System | |
| | F | 9-Apr | | No Class Day | |
| | Sat | 10-Apr | | | |
| | Sun | 11-Apr | | | |
| 13 | M | 12-Apr | 25 | Respiratory System | Exam #6. CH 24, 25. Apr 12-15. Due Assign 13, 14 |
| | T | 13-Apr | | Fetal Pig Dissection and QUIZ on same day | |
| | W | 14-Apr | 26 | Digestive System | |
| | TH | 15-Apr | | | |
| | F | 16-Apr | 26 | Digestive System | |
| | Sat | 17-Apr | | | |
| | Sun | 18-Apr | | | |
| 14 | M | 19-Apr | 26 | Digestive System | Proctorio sample test to prep for exam 7 and optional 8 |
| | T | 20-Apr | | View Cadaver for Respiratory, lymphatic, Digestive, Urinary, Reproductive review. | |
| | W | 21-Apr | 27 | Urinary | No Test Week: 21 to 27th |
| | TH | 22-Apr | | | |
| | F | 23-Apr | 28 | Reproductive | Mostly Kaltura for this chapter. Short reviews for female and male systems |
| | Sat | 24-Apr | | | |
| | Sun | 25-Apr | | | |
| 15 | M | 26-Apr | 28 | Reproductive | |
| | T | 27-Apr | | | |
| | W | 28-Apr | 28 | Reproductive | Exam#7 CH 26-27; Apr. 26-28th. Due: Assign #15, 16 |
| | TH | 29-Apr | | | Final exam week Apr 29 to May 5th |
| | F | 30-Apr | | | |
| | Sat | 1-May | | | |
| | Sun | 2-May | | | |
| 16 | M | 3-May | | Due: Assign#17, CH28 May 3rd. Exam #8 April 29 th to May 5th | |
| | T | 4-May | | | |
| | W | 5-May | | | |