

# Utah State University-Eastern

## HUMAN ANATOMY (BIO 2320)

Fall 2016; 4 Credit-Hour Course

Lecture: MWF 9:20am-11:10am (RVS Rm #186)

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

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**Instructor:**

Tyson D. Chappell PhD.

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**Office:**

Reeves #261

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

**Office Hours:** : MWF ~12:20pm-1:00pm or email or call and I am happy to meet when you are able.

**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.

Right from the start let's delve into 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? 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? No, once you are in your health field programs you ALREADY need to have a deep understanding of anatomy. NOW IS THE TIME, HERE IS THE PLACE when and where you need to be emerging yourself in this world of study and drinking deep from the wells of anatomical knowledge. 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 any other way? When you, or your family, or friends are being cared for due to health problems, don't 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 health field and have a very good job for the rest of their lives vs others.

**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): **Human Anatomy; Author: McKinnley, O'Loughlin; Publisher: McGraw-Hill; Benjamin, Cummings; ISBN: 978-0-07-337809-1;** edition: 3 or the latest edition. Older versions are not recommended and you will need to be responsible for any variations between editions.. Bookstore option also include the color or black and white customized editions: **Color ISBN= 9781121844193** or the **B&W** edition= ISBN **9781121844216**

\*Electronic EBook edition can be purchased through McGraw-Hill. Search for ISBN: **9781121844223 (Title: Human Anatomy TEXT book)**

2. (Optional but **recommended**): 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.

This CD is also on reserve to be used on the library computers. Also, Practice Anatomy Lab (PAL) should be available to use in the library. For Iphone and Ipad users there are many additional resources available through the Apple Itunes apps store. The McGraw-hill website also has many java/flash-based games/labeling exercises that will greatly assist your understanding of the material.

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 system 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. Wicked, awesome, *Mad texting skills will NOT be required nor will they be used at all during class.*

### **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](mailto:debbie.pearson@usu.edu)

For the rare situations in which you find yourself missing a lecture, I will have previous semester lectures on video for you to use to preview or review the class material. It is also not advised that you miss class intentionally with the hopes that you will be able to merely watch the lecture from home. Many students have tried this but view make is successful. **Panopto is meant to be used as a backup in case of emergency and to review material for exams, not as a substitute for attending class.**

### **Library References:**

Four computers in the library allow the access and use of Anatomy and Physiology revealed 2.0 from McGraw-hill that I’ve placed on reserve (every three hours of use and you will need to recheck out the CD) as well as P.A.L. (practice anatomy lab). Check with front desk for which computers that the anatomy software is accessible. Check out the computer’s desktop folder entitled Dr. Chappell’s anatomy software. You will need to pick up the reserve copies of A&P revealed to use on these computers. P.A.L. shouldn’t require additional software to access.

Additionally, there are a couple of anatomy books that are currently on reserve in the library that may help provide additional examples of particular topics that we will be addressing in class.

### **Laboratory:**

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

The lab book is optional. If you want additional contact with the very useful info that will be found on exams, I suggest you purchase the lab book and complete the questions. It is your choice.

\*\*\*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. Students will work in self-assigned groups of two to four in lab depending upon the particular lab. 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 **7 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. Exams are worth **150 points** (~66% computer and ~33% wet lab when applicable). There will be **NO** make-up exams without adequate evidence for a justified reason as to why you didn’t take your exam when it was available. **No exam will be dropped**. Wet lab exams **CAN NOT** be taken early nor late, rather only the day and time scheduled below.

You must bring picture identification to be admitted for the exam.

The Final exam can be taken December 8<sup>th</sup> to 12<sup>th</sup>.

All exams are CLOSED book, No notes, No friends, No cell phones. You may only access what you’ve retained within your AMAZING and HIGHLY EVOLVED brain ☺ . 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 : M-Th: 8:30am to 9:30pm (last test given out at 9pm). Friday: 8:30am-7:30pm (last exam given at 7pm).**

### **Assignments:**

Assignments will be due for every chapter. These assignments will be accessible online and will be open book. They are worth 10 points for each and are meant to HELP you study, learn, and review the material to prepare you for exams. You can and should complete these assignments a few times in order to be sure you fully understand the chapter material. Exam questions will be similar, although not necessarily identical to them. Assignments are worth 10 points if turned in on time or 0 points for turning it in late or if it is not 100% correct. 5 points are earned for each multiple choice exam (simple or difficult). In some situations only some of the questions need to be completed, or sometimes only one of the assignment/exams will be worth all 10 points. Pay attention to Canvas and the due dates for each assignment posted there. 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. Direct links to the assignments are available on Canvas. MAKE A BACKUP, even two, just in case your assignment doesn't get to me. Send the assignment to yourself and even take a screen shot of it with your phone to be extra safe. These assignments can help you greatly with your final grade IF you complete them ALL and earn ALL of your points. It would essentially be like taking one exam open book vs the closed book status of all the normal exams.

For most cases, each assignment is due BEFORE class on the lecture day following the completion of a particular chapter.

### **Classroom Policies:**

1. **Cheating** – Cheating in any form will not be tolerated. This includes, but is not limited to: intentionally using or attempting to use or providing others with unauthorized information, materials, or study aids in any academic exercise or activity. Substituting for another student, or permitting another student to substitute for oneself, in taking an examination or preparing academic work is also considered a form of cheating. In the testing center you can NOT take in your own scratch paper. 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 without prior approval. Those who cheat will be removed from the class roll, and will be subject to the college's disciplinary measures.

2. **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 come on time. Missing class will also cause you to miss out on random extra credit for attendance and/or extra credit questions 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.

3. **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 and DO NOT TEXT MESSAGE** during class. Please turn off the keyboard "clicks" to your tablet devices. Furthermore, it is an embarrassment to you and wastes your time to come to class, put your head down on your desk, and fall asleep. Finally, AVOID being a distraction to other students. You DO NOT have the right to disrupt another student's pursuit of knowledge.

**Library Use:**

Students are encouraged to use the library. I have requested A&P Revealed and PAL 3.0 to be placed on reserve for library use only. Many online anatomical resources are also available and accessible through Canvas.

**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](mailto: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](mailto: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.
18 chapter assignments: 10 points each.....	170 pts
<b>Total Points.....</b>	<b>1220 pts.</b>

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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.

**Extra Credit:** Often I will give extra credit (EC) points on exams.

**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 ~5 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, come by and ask me for more help before an exam, or drop the class.**

**A reminder:** If you are going into the health care field, especially nursing, pharmacy, radiology, dental, physical therapy etc, **WHEN** do you expect to learn all the material you will need to have mastered before entering those programs? Do you think that you will have time to learn all the anatomy then? You need to already have that information in your head and then they will add to that foundation. **NOW** is the time, **HERE** is the place to prepare for your future in the health care 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.

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

## Anatomy 2320; Fall 2016; Lecture and lab

Week	Day	Date	Text Chptr	Topic	Notes/Exams/Assignments
<b>1</b>	M	29-Aug		Syllabus	
	T	30-Aug	1	Finish syllabus. Show the cadaver. Lecture CH 1	Remind students of purge process: No pay, No more study
	W	31-Aug	1	First look at Anatomy	
	F	2-Sep	4	Tissue	Assign#1 CH1
<b>2</b>	M	5-Sep		Labor day	
	T	6-Sep	4	Start examining Histology together in class. All from Michigan State histology site.	
	W	7-Sep	4	Tissue	
	F	9-Sep	4	Tissue	You must be paid up fully by TODAY to prevent your purge! Histology review at 12:30 in lab.
<b>3</b>	M	12-Sep	7	Axial Skeleton	<b>Exam #1;</b> text book CH 1, 4. Sep 12-13. Assign #2 CH4
	T	13-Sep		Axial Bone Review:	<b>Bring lecture notes to identify bones</b>
	W	14-Sep	7	Axial Skeleton	
	F	16-Sep	7	Appendicular skeleton	
	M	19-Sep	8	Appendicular skeleton	Last day to drop without "W." Assign#3 CH 7
	T	20-Sep		Appendicular Bone Review:	<b>Bring lecture notes to identify bones</b>
	W	21-Sep	9	Articulations (first half of chapter primarily)	Assign#4 CH 8
	F	23-Sep	11	Finish Articulations. Start Axial muscles	
<b>5</b>	M	26-Sep	11	Axial Musculature	<b>Exam#2;</b> text book CH 7-9; Sep 26-27. Assign#5 CH9
	T	27-Sep		Bone lab exam (pts go towards exam#2). Axial Cadaver muscle Review	
	W	28-Sep	12	Axial & Appendicular Musculature	
	F	30-Sep	12	Appendicular Musculature	Assign#6 CH11
<b>6</b>	M	3-Oct	13	Append muscle & Surface Anatomy	
	T	4-Oct		Appendicular Cadaver muscle review	pronator teres, pec major & minor: know
	W	5-Oct	13	Surface Anatomy	Assign #7 CH12

	F	7-Oct	13, 14	Surface Anatomy & Neural Tissue	<b>Exam #3</b> ; text book CH 11-13; Oct 7-10
7	M	10-Oct	14	Neural Tissue	Assign#8 CH13
	T	11-Oct		<b>Muscle lab exam (pts go towards exam#3); Human wet brain demo</b>	
	W	12-Oct	15	Brain and Cranial nerves	Assign#9 CH14
	F	14-Oct	15	Brain and Cranial nerves	
8	M	17-Oct	15	Brain and Cranial nerves	
	T	18-Oct		<b>Brain Review and study</b>	
	W	19-Oct	15	Brain and Cranial nerves	
	TH	20-Oct		Brain and Cranial nerves	Lecture. FRIDAY SCHEDULE
	F	21-Oct	15	Fall Break	
9	M	24-Oct	20	Endocrine	<b>Exam #4</b> ; text book CH 14-15; Oct 24-25th. Assign#10 CH15
	T	25-Oct		Wet Brain Exam (pt of Exam #4) Endocrine review, videos	
	W	26-Oct	20	Endocrine	
	F	28-Oct	20	Endocrine	
10	M	31-Oct	22	The Heart	Last day to drop the class. Assign#11 CH20
	T	1-Nov		Wet Heart Review	
	W	2-Nov	22	The Heart	
	F	4-Nov	22	The Heart	
11	M	7-Nov	24	Lymphatic	<b>Exam #5</b> computer only; text book CH 20, 22. Nov 7-8th. Assign#12 CH22
	T	8-Nov		Lymphatic videos; Your Inner Reptile video.	lymphatic videos. Take good notes. Questions from video WILL be on exam #6
	W	9-Nov	24	Lymphatic	
	F	11-Nov	24, 25	Lymphatic. Respiratory system	
12	M	14-Nov	25	Respiratory system	Assign#13 CH24
	T	15-Nov	25	Cadaver respiratory & digestive observation. Respiratory videos. Inner Fish Video (gills slits, sex)	TAKE GOOD NOTES. Exam 6 will have video questions. Lecture Respiratory a little.
	W	16-Nov	26	Respiratory system	Assign#14 CH25

	F	18-Nov	26	Digestive System	
<b>13</b>	M	21-Nov	26	Digestive System	
	T	22-Nov		Fetal Pig Dissection. Digestive videos.	
	W	23-Nov		Thanksgiving Holiday	
	F	25-Nov			
<b>14</b>	M	28-Nov	26	Digestive System	<b>Exam#6</b> (computer only) text book CH 24-26; Nov 28-29th. Inner fish and Reptile questions on exam.
	T	29-Nov	27	Digestive & Urinary System. Lecture	
	W	30-Nov	27	Urinary System	Assign#15 CH26
	F	2-Dec	28	Reproductive	Assign#16 CH27
<b>15</b>	M	5-Dec	28	Reproductive	
	T	6-Dec	28	Reproductive	Videos and lecture
	W	7-Dec	28	Reproductive	
	F	9-Dec	28	Reproductive	Assign#17 CH28
<b>16</b>	Dec 12th to 15th. Mon to Thursday		<b>Exam #7</b> (no wet lab) covering info only from text book CH 27-28		