


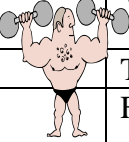







Human Anatomy (Biol 2320) Schedule of Classes, Summer 2017

<u>Week</u>	<u>Day</u>	<u>Subject</u>	<u>Reading in Booklet</u>	<u>Corresponding Reading in Text</u>
1	Mon, May 8	Introduction/A First Look at Anatomy	1-13	1-22
	Tues, May 9	A First Look at Anatomy	1-13	1-22
	 Wed, May 10 Thur, May 11	Integumentary System	14-25	50, 118-145
		Integumentary System	14-25	50, 118-145
	Fri, May 12	Cartilage and Bone Connective Tissue Optional Review Session at 9:50 AM in BNR 102	26-38 ----	146-172 ----
Mon - Thur	Laboratory #2: Introduction and Exam of Axial Skeleton (10 lab points possible)	337-340	174-214	
2	Mon, May 15	EXAM #1/ Cartilage and Bone Connective Tissue	26-38	146-172
 Tues, May 16 Wed, May 17	Axial Skeleton: Skull Last day to drop w/o notation on transcript	39-53 ----	173-203 ----	
	Axial Skeleton: Vertebral Column and Thoracic Cage	54-64	204-219	
Thur, May 18	Appendicular Skeleton: Pectoral Girdle and Upper Limbs	65-71	220-231	
 Fri, May 19 Mon – Thur	Appendicular Skeleton: Pelvic Girdle and Lower Limbs Optional Review Session at 9:50 AM in BNR 102	72-82 ----	113, 230-251 ----	
	Laboratory #3: Examination of Appendicular Skeleton and Laboratory #4: Examination of Muscles of Upper Body (15 lab points possible)	341-343, 344-345	222-245, 261-264, 321-374	
3	Mon, May 22	Articulations: General Features	83-99	252-265
Tues, May 23	Articulations: Selected Articulations	100-112	114, 265-286	
 Wed, May 24 Thur, May 25 Fri, May 26	Muscle Tissue and Organization	113-122	288-292, 306-310, 312, 316	
	Axial Muscles	123-129	300, 321-351	
	Appendicular Muscles Optional Review Session at 9:50 AM in BNR 102	130-142 ----	352-394 ----	

	Mon – Thur	LAB QUIZ #1, Laboratory #5: Examination of Muscles of Lower Body and Skin Suturing, and Laboratory #6: Examinations of Articulations and Circulatory System (15 lab points possible)	346-350,351-356	375-390, 265-281, 655-721
4	Mon, May 29	HOLIDAY	----	----
	Tues, May 30	EXAM #2/ Appendicular Muscles	130-142	352-394
	Wed, May 31	Nervous Tissue	143-147	413-436
	Thur, Jun 1	Brain	148-169	437-470, 524, 531-532
	Fri, Jun 2	Cranial Nerves Optional Review Session at 9:50 AM in BNR 102	170-182 ----	471-483 ----
	Mon – Thur	NO LABS THIS WEEK	----	----
5	Mon, Jun 5	Spinal Cord and Spinal Nerves Last day to drop with “W” on transcript	183-194 ----	484-515 ----
	Tues, Jun 6	Heart	197-212	654-680
	Wed, Jun 7	Heart	197-212	654-680
	Thur, Jun 8	Vessels and Circulation #1	213-225	681-710
	Fri, Jun 9	Vessels and Circulation #2 Optional Review Session at 9:50 AM in BNR 102	226-238 ----	691-721 ----
	Mon – Thur	Student Evaluations of TAs and UAs, Laboratory #10: Videos on Joint Replacement and Laboratory #7: Examination of Respiratory, Digestive, Reproductive, Nervous, and Urinary Systems (10 lab points possible)	371, 357-360	Pages sited in lab notes
6	Mon, Jun 12	EXAM #3/ Vessels and Circulation #2	226-238	691-721
	Tues, Jun 13	Lymphatic System	239-249	722-744
	Wed, Jun 14	Respiratory System	250-268	745-776
	Thur, Jun 15	Digestive System #1	269-280	777-795
	Fri, Jun 16	Digestive System #2 Optional Review Session at 9:50 AM in BNR 102	281-295 ----	795-814 ----
	Mon –Thur	LAB QUIZ #2, and Laboratory #8: Examination of Surface Anatomy (10 lab points possible) (*You MUST confirm with your TA your total points earned in lab up through this lab!)	361-365	395-412
7	Mon, Jun 19	EXAM #4/ Digestive System #2	281-295	795-814
	Tues, Jun 20	Urinary System	296-308	815-839
	Wed, Jun 21	Reproductive System: Female	309-322	840-859
	Thur, Jun 22	Reproductive System: Male	323-333	859-876

	Fri, Jun 23	COMPREHENSIVE FINAL EXAM 7:50-9:40 AM (note we start 10 minutes early at 7:50 AM!)	----	----
	Mon-Thur	Laboratory #1: Video on Otzi the Iceman Laboratory #9: Examination of Cranial Nerves, and (10 lab points possible)	336, 366-370	471-479

**Human Anatomy
Biol 2320 (4 credits)
Summer 2017**

A. Instructor: D. Andy Anderson, PhD.

Address: Biology Department
VSB 231
Utah State University
Logan, UT 84322-5305
Phone: 435-797-1913
E-mail: andy.anderson@usu.edu

B. Teaching Assistants (TAs), Undergraduate Aides (UAs), and Supplemental Instructor (SI)

1. There are TAs, UAs, and an SI assigned to this course. Their names and office hours will be provided during the first days of class.
2. Historically, students who utilize the TAs, UAs, and SI faithfully earn higher grades!

C. Meeting times:

1. **Lecture** – (CRN # 30762) this class meets on Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays from 8:00 AM to 9:40 AM in BNR 102. There is an optional review session every Friday for 50 minutes at 9:50 AM in BNR 102.
2. **Laboratory** – There are four laboratory offerings which meet in **BNR 320** at the times indicated below. Students are **required** to sign up for one laboratory section per week. Please go to the laboratory you regularly attend! **Don't move around.** **This is particularly important now that you are earning points in lab!**

CRN #	Section	Day	Time
30763	501	Monday	10:00 AM-1:00 PM
30764	502	Tuesday	10:00 AM-1:00 PM
30765	503	Wednesday	10:00 AM-1:00 PM
30765	504	Thursday	10:00 AM-1:00 PM

D. Required Materials for Biol 2320:

1. Michael McKinley's and Valerie Dean O'Laughlin's "Human Anatomy" -4rd edition, 2015. This text is available at the USU Bookstore.
 - a. This text, at no additional cost, comes with VERY useful on-line resources (that are OPTIONAL). When you purchase your new text there will be "Connect Plus" codes packaged in the book that will allow you access to these resources when you go to the web site <http://connect.mheducation.com/class/a-anderson-smartstart-course>
 - 1) When you log into the site there are 3 main things that you can access for additional self-study:
 - a) LearnSmart Study modules (smart flashcards: 1 module for every chapter in the book)
 - b) The entire McKinley text as an interactive eBook
 - c) Anatomy and Physiology Revealed (online version). These modules are integrated into the McKinley eBook (make sure your pop up blocker is turned off!)
2. Course booklet which contains all needed outlines. This booklet can be bought from the USU Bookstore.
3. A ¾ length lab coat. These are available as the USU Bookstore.

E. Optional Materials for Biol 2320:

1. Optional "Connect Plus" feature of textbook cited above.
2. I used to recommend that students buy a medical dictionary, but now most students can simply use their smart phones to look things up.
3. It is recommended (but not required) that students have one other anatomy text available for study. An extra text will often serve to clarify points which are confusing, or reinforce those which are considered important. At the request of previous students, I will suggest a good book you could order from Amazon.com if you desire:
 - a. "Atlas of Human Anatomy", 6th edition, by Frank Netter.

F. Course Booklet:

1. For each lecture in this course the student is provided with an outline of the subjects to be discussed that day. These outlines are designed to guide your participation during the lectures and also to guide you in your reading of the textbook. These outlines typically have articles attached on which you will be tested. All of these outlines and articles have been collected into a course booklet for your use.
2. If there is information in your textbook that is not mentioned in class, or not mentioned in the course booklet, it will not be on the exam.
 - a. You are encouraged to read supplemental information in your text, but you will only be tested on what is cited in the booklet or in our class discussions.
 - b. Note that the booklet often requires you to read Clinical Views in the text (i.e.-*Read the clinical view on page 18-19 about medical imaging procedures*).

G. Lectures and Images On-line

1. Each lecture, and Friday review session, will be recorded (if all goes well with the equipment) and placed on reserve, with the images used, until the end of the semester the next time the course is taught (this means the lectures and images are always there not only from the current semester, but also from the last summer session, summer 2016). These can serve as a great study aid and also a good way to prepare for upcoming lectures. They can be accessed by going to the CANVAS site for this course.

H. Four Examinations and Two Lab Quizzes for Biol 2320 (500 points possible with exams and 100 points possible with quizzes)

1. There will be four 50-minute exams of 100 points each and a 110-minute comprehensive final exam (over everything except articles used in earlier exams) worth 200 points. The lecture notes, **class discussions**, handouts, laboratories, and occasional articles distributed in class will be used to formulate exam questions.
2. **There will be two lab quizzes (50 points each) presented in the laboratory that will be prepared and administered by the TAs/UAs.**
3. Students will have the score on their lowest 50-minute exam dropped. Their grade will be calculated using the remaining three 50-minute exams, the lab quizzes, pre-lab quizzes, lab attendance points, and the final. (If you miss a 50-minute exam, that is the one which will be dropped).
4. An example first exam is included at the back of this syllabus. While the questions will be different this year, the style will be exactly the same (multiple choice, fill-in-the-blank, two-part story questions, and essay questions).
5. Those students who have difficulty with the example first exam and example questions in the book should see the instructor **as soon as possible** to arrange free tutoring with the TAs, SI, and UAs.
6. I will attend the Friday review session (which will be recorded and posted at the CANVAS site) and ask questions in a style similar to the way they will appear on your written exams.
7. Those students who (“heaven forbid!”) score less than 70% on the first two exams **should seriously seek intensive tutoring or drop the class.**
8. The letter grade is based on the percentage of total points earned on the three highest 50-minute exams (100 points each), the two lab quizzes (50 points each), the points earned in lab for the pre-lab quizzes and attendance (70 points possible) as cited below, and the comprehensive final exam (200 points). **THERE IS NO EXTRA CREDIT OR SPECIAL PROJECTS TO IMPROVE YOUR GRADE.**

I. Points Earned in Lab for Pre-Lab Quizzes and Attendance for Biol 2320 (70 points possible, see weekly amounts possible on class schedule above)

1. A feature of this course is the ability of students to earn 5-10 points for a pre-lab quiz at the start of each of the 6 active labs and an additional 5 points for attendance.
2. The pre-lab quiz will be 5-10 questions over the lab that is to be done that day and it will start at 3 minutes after the scheduled lab starting time! It will only last for about 5 minutes.
 - a. This pre-lab quiz accomplishes two things: it insures you are to your lab on time and it makes the TAs and UAs happy because you have looked over the lab before arriving and ready to answer the pre-lab questions.
 - 1) If a student arrives in the lab too late to take the pre-lab quiz, they will NOT be allowed to take the pre-lab quiz. Remember one of the purposes for this pre-lab quiz is to have student arrive on-time!
 - b. **Each TA** in each of the respective labs will create 5 straightforward questions for the students to answer, print up this pre-lab quiz before lab, score it, and keep a record of points earned (5-10 points per pre-lab quiz) to be turned in to me at the end of the semester.
 - 1) The scored pre-lab quizzes can be returned to the students at the next lab.
3. **Each UA** will take attendance (worth 5 points) at some point in the lab (usually after one hour) and give that list to the **TA** for recording.
 - a. So, the **TA** will be keeping a permanent record of the points earned from the pre-lab quiz and from attendance (with the help of the UA).

Actual Points Earned	Percentage of Total Points Earned	Grade
620-670	93-100	A
600-619	90-92	A-
573-599	86-89	B+
553-572	83-85	B
533-552	80-82	B-
506-532	76-79	C+
486-505	73-75	C
466-485	70-72	C-
439-465	66-69	D+
399-438	60-65	D
398 or less	59 or less	F

8. The breakdown of points is shown above. The letter grade is based on the percentage of total points earned on their three highest hourly exams (100 points each), the two lab quizzes (50 points each), the pre-lab quizzes and lab attendance (70 points total), and the final (200 points). **There is NO extra credit or special projects to improve your grade!** I simply add up the points and assign you the grade that YOU have earned.
9. Up until the last office hour of the semester you are invited to see me, or the TAs, to view the exam keys and debate your scores. **After the final exam I will only discuss the final exam with you, not your scores on earlier tests or quizzes.**

J. Course Goals:

1. The main goal of this course is to give students a basic understanding and working knowledge of the structure of their own bodies. Numerous medical examples, and a few athletic stories, will be provided to illustrate the importance of the systems presented.
2. It is expected that upon successful completion of this course students will be able to effectively apply the knowledge gained in more advanced courses, in their careers, and in their daily lives.

K. Student's Responsibilities:

1. The student is expected to attend all lectures and laboratories, take supplemental notes, read the assigned readings, refer to suggested references as needed and achieve a cumulative score of greater than 75% on the exams.
2. In the event there is some difficulty, it is the **student's responsibility** to contact the instructor, TAs, UAs, or SI for advice or assistance. Free tutoring is available with the TAs, UAs, and SI.

L. Unacceptable Classroom Behavior

Since a significant goal of this class is to prepare each of you for your upcoming exams, then behavior that disrupts the classroom environment will be discouraged.

1. Once class has started, **cell phones should be silenced** and no ring tones, conversations, or text messaging are permitted.
2. Once class has started, **talking or whispering among students is strongly discouraged**. If you need to talk, please leave the class and conduct your conversation outside. If students persist in talking among themselves during class they will be invited to my office and given a written warning. If they persist in talking after this warning, they will be asked to leave the room so other students can benefit from the limited amount of class time available.
3. Use of laptop computers in class is acceptable, provided it is utilized for notes or materials used in this class. **It is not acceptable to use your computer in class for recreational purposes or for doing work for a different class**. When you come to this class it is expected that you will focus your attention on this class and not engage in computer activities that detract from the classroom experience or that will distract your classmates. If the problem persists, you will be requested to cease your computer activities.

M. Instructor's Responsibilities:

1. The instructor is expected to attend all lectures, read the assigned reading, present supplemental articles, and prepare examinations which are fair and representative of the material covered. The instructor will also be available at posted office hours to answer **specific** student questions and provide needed assistance.

N. Teaching Assistants' and Undergraduate Aides Responsibilities:

1. Typically there are numerous departmental TAs and UAs assigned to this course each semester. These TAs and UAs will come to the lectures as needed so that they will be qualified tutors for each of your exams. The UAs will attend the review sessions each week where the students are quizzed by the UAs with questions the UAs have prepared. The TAs and UAs will assist the instructor in writing the lecture exams. The TAs and UAs will correct and score the exams/quizzes promptly after they are taken by the students. The TAs and UAs will have published office hours to provide help to interested students. **(If a TA or UA fails to show up at his/her office hour, please let me know!).**
2. The TAs and UAs are also expected to attend their individual laboratories, have all the necessary materials available, be knowledgeable about the scheduled lab exercises, and record the scores for the pre-lab quizzes and attendance. The TAs and UAs will write and administer two lab quizzes. After correcting these quizzes they will turn them in to me for grade recording and posting.

O. Supplemental Instructor's (SI) Responsibilities:

1. I have fortunately been provided an undergraduate student to serve as an SI to assist you in getting a good grade in this challenging course. The SI will have two meetings during the week and will have prepared practice questions of the same style as you may expect on your upcoming exams and quizzes. The end-of-the-semester data I am provided by the SI program clearly reveals it improves the performance of most of those students who participate.

P. Library References:

1. A copy of the course textbook "Human Anatomy", 4th edition, by McKinley and O'Loughlin is on reserve at the Media Collections section of the Library.
2. Check the subject index in the Library to find additional useful books on anatomy and physiology.

Q. Below you will find a University statement on Academic Honesty.

1. **DO NOT REMOVE ANY EXAMINATION MATERIALS FROM THE CLASSROOM OR LABORATORY ON EXAM DAYS!**
2. **DO NOT COPY, PHOTOGRAPH, OR REMOVE ANY EXAMINATION MATERIAL FROM THE TEACHING ASSISTANTS' OR SI'S OFFICES!**
3. If you fail to follow these rules, I will make every effort to subject the offender to the disciplinary procedures designated by the University.

Honor Pledge

Students will be held accountable to the Honor Pledge which they have agreed to: "I pledge, on my honor, to conduct myself with the foremost level of academic integrity."

Academic Dishonesty

The Instructor of this course will take appropriate actions in response to Academic Dishonesty, as defined the University's Student Code:

Acts of academic dishonesty include but are not limited to:

1. Cheating: (1) using or attempting to use or providing others with any unauthorized assistance in taking quizzes, tests, examinations, or in any other academic exercise or activity, including working in a group when the instructor has designated that the quiz, test, examination, or any other academic exercise or activity be done "individually"; (2) depending on the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; (3) substituting for another student, or permitting another student to substitute for oneself, in taking an examination or preparing academic work; (4) acquiring tests or other academic material belonging to a faculty member, staff member, or another student without express permission; (5) continuing to write after time has been called on a quiz, test, examination, or any other academic exercise or activity; (6) submitting substantially the same work for credit in more than one class, except with prior approval of the instructor; or (7) engaging in any form of research fraud.
2. Falsification: altering or fabricating any information or citation in an academic exercise or activity.
3. Plagiarism: representing, by paraphrase or direct quotation, the published or unpublished work of another person as one's own in any academic exercise or activity without full and clear acknowledgment. It also includes using materials prepared by another person or by an agency engaged in the sale of term papers or other academic materials.

Full text of the Student Code available at available at available at
<http://www.usu.edu/studentservices/pdf/StudentCode.pdf>:

R. Students with Disabilities

1. Students with physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, 797-2444, 797-0740 TTY, or toll free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice.

S. University policy on withdrawals and incomplete grades.

1. I direct your attention to the current USU policy on dropping courses in the USU Catalog.
2. You will note that "incomplete grades" are only given for conditions beyond the students' control and not due to poor performance. Students who receive an incomplete **MUST** keep the scores they earned up until they leave the class. At a later date they are **ONLY** allowed to complete the quizzes and exams that remained unfinished.

T. Notice on lab fees

1. As part of your registration for this class you were required to pay a "lab fee" of approximately \$70-\$80. This fee is used by me to buy cadavers (currently \$1,950 each) and lab supplies (bags, labels, markers, models, containers, and preservative chemicals). All of your lab fees are used to enhance your learning opportunities in this course and to help your

TAs, UAs, SI, and your instructor to hopefully make it easier for you to succeed in this challenging subject.

U. Laboratory Safety

1. After death bodies will begin to decompose and bacteria, mold and fungi can begin to grow on tissue. In order to slow down these events, bodies are treated in a process called “embalming.” Embalming involves injecting specific fluids into the arteries (often the carotid artery) where they will spread through the arteries, capillaries and veins to the organs and tissues of the body, aiding in preservation. The primary embalming chemical is formaldehyde. Formaldehyde functions by cross-linking proteins. It is toxic and a known carcinogen, meaning there is evidence that exposure to this chemical can increase susceptibility to cancer. Cadavers arrive at our lab with formaldehyde perfused within the cadaver. While in our lab, cadavers will be regularly doused with a wetting solution. Wetting solutions can contain toxic chemicals meant to inhibit microbial growth on the cadavers. Cadavers are placed on specially designed tables with built in ventilation that vacuums away fumes and odors, thus minimizing exposure. Besides specialized venting, exposure to toxic chemicals in the laboratory is minimized by the use of protective clothing.

The following use of personal protective gear is expected of anyone entering and participating in the laboratory:

- Fully closed shoes
- Full-length pants or skirt
- Shirt or top with sleeves covered
- Nitrile gloves, which prevent toxic chemicals from reaching your skin
- $\frac{3}{4}$ length lab coat that is fastened shut (these are for sale in the USU Bookstore)
- All gloves are disposed of in the trash cans after removal.
- Wash your hands before you leave the laboratory with the soap and water provided in the lab.

If for any reason you feel hot or faint, it is important to tell someone and sit down on the floor (or lie down) immediately! If instead you try to walk out of the lab you risk passing out and suffering a bad fall onto a hard floor!

Although data is inconclusive, exposure to the chemicals while participating in the lab (more so if one is participating in active dissections) may be harmful to a developing fetus. Therefore, it is advisable to pregnant women (especially in the first trimester) or those who plan on becoming pregnant during the semester to consider this issue when determining the timing of taking the class. If the course must be taken at this time, please discuss options with the Instructor. If there are concerns regarding this issue that the Instructor cannot answer, please contact Rachel Curry in USU's Environmental Health and Safety Office (435-797-2892, rachel.curry@usu.edu), or seek advice from your obstetrician.

2. **Rules for personal protection in the Cadaver Laboratory (BNR 320)!**
 - a. The entire university has adopted a safety protocol for all student laboratories. The **minimum** required protection to enter and participate in this laboratory is:

- 1) Fully closed shoes
 - 2) $\frac{3}{4}$ length lab coat that is fastened shut (these are for sale in the USU Bookstore)
 - 3) Nitrile gloves (provided in the lab) when working with cadavers.
- b. If you do not have this minimum required protection, you will NOT be allowed to enter or participate (no exceptions for ANY time you are in the lab!).
- 1) I realize that for some labs you merely have a quiz or watch a video. However, the University policy is for entering a lab, regardless if the lab is active or not, because of the hazardous chemicals in the lab.
 - a) The nitrile gloves will need to be worn during active labs.
- c. Additional protective gear, such as goggles, face shields, or face masks may be provided depending upon the lab activity. I do not anticipate that at this time in Human Anatomy.

General Information for Interested Students Biol 2320

Some students may be interested in taking further courses with me. This sheet will provide that information.

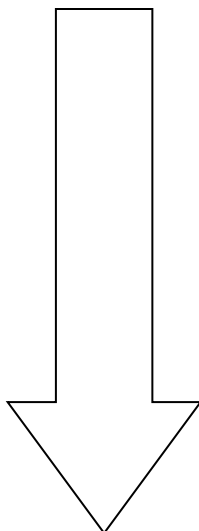
A. Courses Taught by D. Andy Anderson

1. Summer Semester 2017
 - a. Human Anatomy (Biol 2320) 4 credits
2. Fall Semester 2017
 - a. Elementary Microbiology (Biol 2060) 4 credits
 - c. Human Dissection (Biol 4000) 1 credit
2. Spring Semester 2018
 - a. Human Anatomy (Biol 2320) 4 credits
 - b. Bioethics (Biol 3100) 3 credits
 - c. Advanced Human Physiology (Biol 4600) 5 credits
4. Others
 - a. Independent Study (Biol 3760) 1-3 credits – available every semester
 - 1) Students earn 1-2 credits from Andy by writing one or more term papers on a mutually agreed topic.
 - b. Teaching Internship (Biol 4710) 1 credit – available every semester
 - 1) This credit is available to students who wish to volunteer as an undergraduate aide in a class they have previously excelled in (“B” or better).
 - c. I oversee a Medical College Admissions Test (MCAT) review course (Biol 1030: MCAT Preparation), one credit, pass-fail) that is offered in the spring.
 - d. I oversee a Dental Admissions Test (DAT) review course (Biol 1040: DAT Preparation), once credit, pass-fail) that is offered in the spring.

B. Other Courses of Interest

1. Emergency Medical Technician (EMT), college credits possible (see EMT instructor)
 - a. Contact Bridergland Applied Technology College (435-753-6780).
 - 1) These classes have limited enrollment.
4. Biology Prehealth Programs Orientation (Biol 1750), 1 credit, fall semester. This course is designed to allow students to meet and listen to a wide variety of health professionals so they can perhaps choose a career for their own future.

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**Student Performance
On Exams and Quizzes in Biol 2320
During the Last Ten Years**

Average Quiz Scores (50 pts)

Average Exam Scores (100 pts)

Year	Semester	#1	#2		#1	#2	#3	#4	Final
2016	Summer	32.6	32.1		72.3	65.0	62.8	65.5	67.0
2016	Spring	36.9	37.7		70.2	70.2	63.1	63.5	70.5
2015	Summer	37.3	38.9		74.2	71.9	61.8	74.7	72.3
2015	Spring	40.3	31.7		71.4	75.3	61.3	59.8	68.0
2014	Summer	40.8	41.3		75.4	74.0	61.8	---*	69.4
2014	Spring	40.1	34.8		72.3	74.3	60.7	61.6	64.2
2013	Summer	36.3	36.5		72.8	72.2	58.2	----*	68.4
2013	Spring	38.0	37.1		67.6	73.2	66.9	66.0	69.2
2012	Summer	40.8	38.6		70.9	71.6	61.6	----*	72.6
2012	Spring	42.0	39.6		70.0	76.9	71.6	65.9	72.8
2011	Summer	38.2	35.9		72.5	64.6	58.0	70.9	70.0
2011	Spring	40.3	36.4		67.7	74.8	72.2	63.8	67.8
2010	Summer	40.3	36.5		74.8	72.5	66.6	76.6	75.8
2010	Spring	38.8	33.7		70.0	73.8	69.0	64.9	71.4
2009	Summer	39.9	41.2		66.3	71.5	64.3	70.1	74.4
2009	Spring	38.3	37.5		73.9	76.3	57.7	67.9	72.2
2008	Summer	N/A	N/A		N/A	N/A	N/A	N/A	N/A
2008	Spring	38.8	36.6		72.5	78.0	55.1	68.4	72.8
2007	Summer	42.2	33.9		82.2	75.8	61.2	71.8	75.6
2007	Spring	40.8	38.3		72.1	77.7	60.8	70.3	72.7
Average		39.1	36.7		72.1	73.1	62.9	67.6	70.9

Students in spring often do poorly on Exam #3 because it is shortly after spring break and they lose their regular study habits.

*The summer sessions were shortened starting from 2012-2014 to 6.5 weeks, so there was no time for an Exam #4. Now that we have returned to a 7-week schedule, I can provide 4 50-minute exams!

**Student Final Grades in Previous Ten Years
Of Human Anatomy (Biol 2320)**

Semester	Year	Position	Points	Grade	Semester	Year	Position	Points	Grade
Spring	2016	High	670#	A	Summer	2016	High	648.5#	A
Spring	2016	Low	192	F	Summer	2016	Low	129	F
Spring	2016	Average	520.9	C+	Summer	2016	Average	471.6	C-
Spring	2015	High	666#	A	Summer	2015	High	635.5#	A
Spring	2015	Low	169.5	F	Summer	2015	Low	241	F
Spring	2015	Average	501.9	C	Summer	2015	Average	516.3	C+
Spring	2014	High	669.5#	A	Summer	2014	High	545.5#	A
Spring	2014	Low	213	F	Summer	2014	Low	260.3	F
Spring	2014	Average	497.4	C	Summer	2014	Average	433.8	C+
Spring	2013	High	596	A	Summer	2013	High	481*	A
Spring	2013	Low	140	F	Summer	2013	Low	119	F
Spring	2013	Average	446	C	Summer	2013	Average	363.4	C
Spring	2012	High	580.5	A	Summer	2012	High	484.5*	A
Spring	2012	Low	240	F	Summer	2012	Low	81	F
Spring	2012	Average	462.7	C+	Summer	2012	Average	377	C
Spring	2011	High	581.5	A	Summer	2011	High	573.5	A
Spring	2011	Low	140	F	Summer	2011	Low	96.5	F
Spring	2011	Average	445.1	C	Summer	2011	Average	436.8	C
Spring	2010	High	595.5	A	Summer	2010	High	567.5	A
Spring	2010	Low	132	F	Summer	2010	Low	251	F
Spring	2010	Average	451.5	C	Summer	2010	Average	478.3	B-
Spring	2009	High	591	A	Summer	2009	High	577.5	A
Spring	2009	Low	164.5	F	Summer	2009	Low	194	F
Spring	2009	Average	453.2	C+	Summer	2009	Average	460.2	C+
Spring	2008	High	581	A	Summer	2008	High	N/A	N/A
Spring	2008	Low	189	F	Summer	2008	Low	N/A	N/A
Spring	2008	Average	451.4	C	Summer	2008	Average	N/A	N/A
Spring	2007	High	592.5	A	Summer	2007	High	598	A
Spring	2007	Low	100	F	Summer	2007	Low	304.5	F
Spring	2007	Average	458.4.5	C+	Summer	2007	Average	469.1	C+

- * The summer semesters was shortened to 6.5 weeks from 2012 to 2014, so there was not time for an Exam #4 and only a total of 500 points were possible rather than the previous 600 points.
- # Starting in 2014 students could now earn up to 80 points for pre-lab quizzes and attendance in the labs.