

Biology 2420-71 Human Physiology
Spring 2019
MW 3:30-5:30, Rm 201, Sandy Campus

Professor

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TA Laura Slusser

Text: Cindy L. Stanfield, Principles of Human Physiology, 6th ed. Benjamin Cummings

The objective of this course is to learn how the human body works. To this end we will cover how the body maintains homeostasis, how it responds to stimuli, and how various diseases disrupt these processes. To reach these expected learning outcomes this course will:

- Describe how cells take in nutrients and generate and store energy
- Describe how cells communicate
- Describe the basics of hormonal control
- Describe how the brain perceives and sends information
- Describe how the senses of sight, hearing, smell and touch work
- Describe how the circulatory and respiratory systems interact to maintain homeostasis
- Describe how the renal system works to maintain fluid and salt balance

In order to treat all students equally, there is no opportunity to do an extra credit assignment at the end of the course in order to raise your grade. I am sorry, but I will not respond to any request for extra credit to improve one student's grade. Therefore, in order to do as well as you can, please consider the following suggestions and comments.

This course is challenging. If possible, you should plan your semester schedule to allow for ample study time and not load up on multiple rigorous courses.

This section meets for two hours twice a week. Therefore, each meeting will cover material normally covered in two 50-minute lectures. Prepare yourself as much as possible to stay focused for the entire time.

This is not an introductory course. We will go into some detail on how the human body works. Course lecture slides are posted prior to each lecture. It is a good idea to read the text or look over the slides before class so that you have some idea what each lecture covers.

Study questions are posted for each chapter to help you focus your study efforts. We will go over the study questions for each chapter usually within one or two class periods following the lecture. This discussion time provides an opportunity to practice responding to questions. Being able to respond in class is a good way to judge how effectively you are studying. Students typically do better on tests when they prepare and respond to questions during lecture and discussion time rather than simply writing down responses given by other students.

The dates for all quizzes and exams are shown below. It is the objective of the course to keep these dates. However, it is possible that an unexpected event(s) may make it necessary to change a date. **Therefore, if you intend to be absent from class, you need to confirm all test dates.**

Grading

3 midterms, 100 pts each

1 final, 100 pts, the final is not cumulative

Weekly quizzes (8 quizzes each worth 4 points; keep the best 5, I will throw out the 3 lowest at the end of the semester, therefore there is a possible of 20 total points from quizzes. If you miss a quiz there is no way to make it up, it will count as one of your lowest quiz scores.

Extra credit up to a maximum of 21 points (5% Of your grade): 2-4 questions will be randomly asked during most class periods, you need to answer with either a Clicker or by cell phone-based electronic response using the Turning Point Cloud application. Each method requires an active license purchased online or in the book store. The percent correct responses given will be multiplied by 21 to determine the amount of additional points to be added to your total points. A total of 420 points possible comes from 4 exams and your 5 highest quiz scores. Once you've taken all tests and quizzes, your extra credit points will then be counted as extra points. Your point total will be divided by 420 to obtain your final grade. **In the event your final total score includes a fraction of a percent, standard rounding rules will apply.** For example, if you have 84.4%, your final score will be 84. If you have 84.5%, your final score will be 85%. **Please do not ask that 84.4 should also be rounded up. To ensure you are not a fraction of a percent below the grade you want/need, be sure to attend class regularly and respond to as many extra credit questions as possible.**

You can calculate your grade at any time in this class by determining the percentage of the points that you have earned in each exam and quiz taken plus any extra credit points earned and looking at the grading scale below.

Grade percent of points out of a possible 420 points

A	90% and above
A-	85-89%
B+	80-84%
B	75-79%
B-	70-74%
C+	65-69%
C	60-64%
C-	55-59%
D	50-54%
E	less than 50%

Class materials

Required Electronic Transmitters: We will be using Turning Point response devices (electronic transmitters "clickers" from the bookstore or you can use a cell phone) to take quizzes at the beginning of class on Wednesdays during weeks when there isn't an exam. **Whichever method you used to respond to quizzes, you will need an active/current Turningpoint license.**

Textbook: Daily reading out of Stanfield's *Principles of Human Physiology* (6th edition) is not required but recommended.

The lecture notes are designed to condense the reading material and introduce new or updated information.

Class website and your email address: We will be using the Learning Management System (LMS) "Canvas," which is found at utah.instructure.com web address. The following items will be posted to the class website: the class this syllabus, lecture slides and study questions. Additionally, all of your scores on the exams and quizzes will be posted to

the Canvas site. **It is your responsibility to periodically login to Canvas and verify that your scores are being correctly recorded.** Emails may be occasionally sent about important class events, such as reminders for exams or review sessions. You should check your University email and Canvas for announcements.

Course prerequisites: A basic understanding of general biology and introductory chemistry is expected. Therefore, the minimum recommended prerequisites are General Biology, (BIOL 1210) and General Chemistry I (CHEM 1210). However, you may enroll at your own risk with approval from the Biology Department without taking these courses or their equivalents.

Examinations: There will be 4 exams, each worth 100 points. Each exam will cover about 1/4 of the course material. The final exam is not comprehensive. Each exam will count towards your final grade; you cannot drop any of the exams. You should bring a pen to the exams. If you use pencil, you cannot ask for a regrade on a question. Mobile phones, an iPod Touch, or programmable calculators are not allowed. In addition, you should not use “white-out” during examinations. There will be no make-up exams, except in rare pre-approved situations and last-minute emergencies, both of which require documentation. If you have a pre-existing conflict with one of the exams, you must receive approval at the beginning of the semester to schedule a make-up exam. Emergencies that arise on the day of the exam will also need official documentation, including auto accidents (police report), hospitalization (note from the attending physician), or a death in the family (copy of the obituary).

Register your transmitter: **You must register your transmitter or cell phone by using the link posted for the course on Canvas. Click on “Modules” from the left-hand column of options under this class.** Then click on “Clicker Registration.” Enter your transmitter ID, which is found on the back of your transmitter. You must register your transmitter before the first quiz. Occasionally, students may have errors when they reach this webpage or the page may ask for a username and password. To avoid these errors, use Firefox or Chrome web browsers. You will not receive any credit for the quizzes until you register your transmitter.

Electronic quizzes using your transmitter: There will be 8 electronic quizzes. You must have an active/valid Turningpoint license and register a clicker transmitter or your cell phone to take the quizzes. The first quiz will occur on the Wednesday of the second week of class. Non-programmable calculators can be used at any time during a quiz. Each quiz will cover the material since the last quiz or a topic chosen from the previous lecture. **After dropping your 3 lowest quiz scores, the remaining quizzes will count towards a total possible of 20 quiz points.** Because of the nature of these quizzes, there is absolutely no opportunity to make them up. If you are unable to take a quiz for any reason, you will receive a zero for that quiz. This includes events such as illness, University athletics, jury duty, funerals, weddings, birth of a baby, forgetting to bring your transmitter to class, or malfunctioning transmitters. Make-up quizzes are not possible. There are no exceptions to this policy. The primary reason for allowing students to drop 3 quizzes is to accommodate unexpected emergencies and officially excused events.

Extra Credit: **There will be random times during most lectures where you can earn extra credit if you are present and response to questions with a clicker or cell phone in class.** You can earn up to a total of 21 extra credit points (5% of your grade) that will be added to your point total at the end of the semester. Your extra credit points will be calculated from the percentage of correct answers given divided by total number of questions asked during class. You must be in class with your transmitter registered and functioning to receive this extra credit. **There will be no additional opportunities for extra credit in this course.**

Examination regrade policy: If your exam is incorrectly graded or there is any type of miscalculation in your exam score, you may submit your exam for a regrade by the next class period. Exam regrades will not be accepted after this time. For

example, if exams were returned to the class on Monday and the next class period is Wednesday, then all exam regrades must be submitted by that day (Wednesday). You must be detailed and explicit with regards to exactly what mistake was made in the grading of your exam. If you take the exam with pencil or white-out, regrade requests will not be accepted. Your exam may be completely regarded which may result in an even lower grade. Regraded exams are always returned to students with the following exam.

Class drop (delete) and withdrawal policy: It is your responsibility to be aware of the deadlines associated with dropping or withdrawing from the course and exercise your right to drop or withdraw from the course by those deadlines, if you deem it necessary. The dates included in the syllabus are deemed to be correct however, you need to verify any date to ensure they are correct. Instructors do not have the ability to withdraw or drop students after these deadlines.

Incomplete policy: According to University of Utah regulations, an incomplete grade can only be given if all three of the following requirements are met: 1. You are passing the class (at least a C), 2. You have finished 80% of the class (the first three midterm exams), 3. Something beyond your control has prevented you from finishing the class, such as serious illness. Only very rarely do students meet these requirements. You can read about the University policy here: <http://registrar.utah.edu/handbook/incomplete.php>. Incomplete grades cannot be used to allow students to take a class a second time without paying tuition. An incomplete grade does not erase the scores from your current exams. It only allows you to take the final exam at a later date.

Academic integrity: You are expected to be honest in your academic studies. **Academic dishonesty of any type during the semester will result in a failing grade for the exam or quiz, and may result in a failing grade for the course.** Academic dishonesty includes the use of cheat-sheets, note cards, dictionaries, or books during an exam or quiz. Looking at another student's exam or transmitter during a quiz is cheating. Using a programmable calculator, smart phone, notebook computer, or tablet computer during a quiz or exam also qualifies as cheating. During exams and quizzes, you are only allowed a single non-programmable calculator and a pen. Blank scratch paper, if requested, is also permissible. During quizzes absolute silence must be maintained and your eyes should be on the screen the entire time. All instances of academic dishonesty are recorded in a University database, which is shared by all academic units on campus. If you are caught copying from another student, you will receive a zero for that test.

University disability policy: The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

<u>Date</u>	<u>day</u>	<u>Lecture Topic</u>	<u>Chapter</u>
1/7	M	Introduction to physiology and biomolecules	2
1/9	W	Cell structure & Function	2
1/11	Last day to add w/out a permission code and last day to wait list		
1/14	M	Metabolism	3
1/16	W	Cell membrane function QUIZ	4
1/18	Last day to add, elect CR/NC, or audit classes		
1/21	Martin Luther King Holiday		
1/23	W	Cell membrane function (cont.)	
1/28	M	Chemical messengers QUIZ	5
1/30	W	Endocrine system	6
2/4	M	Exam 1 over chapters 1-5	
2/6	W	Neurons and electrical impulses	7
2/11	M	Synaptic transmission and neural integration QUIZ	8
2/13	W	CNS	9
2/18	M	Sensory systems, Part 1 QUIZ	10
2/20	W	Part 2 vision	
2/25	M	3 vision Hearing, taste and smell	
2/27	W	Exam 2 over material cover from 1/30 through 2/20	
3/4	M	Autonomic nervous system	11
3/6	W	Muscle physiology	12
3/8	last day to withdraw from classes		
Spring Break March 10-17			
3/18	M	Circulatory system QUIZ	13
3/20	W	Cardiac function	14
3/25	M	Blood QUIZ	15
3/27	W	Respiratory system	16
4/1	M	Exam 3 over material from 2/25 through 3/25	
4/3	W	Gas exchange	17
4/8	M	Renal function QUIZ	18
4/10	W	Fluid and electrolyte balance QUIZ	19
4/15	M	GI tract	
4/17	W	GI tract (cont.)	20
4/19	Last day to reverse CR/NC option		
4/22		Review	
4/24		Final exam over material from 3/27 through 4/22	