BIO 2324.030 Human Physiology

Syllabus Fall 2019

Instructor

Ms. Christie L. Adkins, M.S.
Office: 118-B, Raymond C. Cavness Science Building
Phone: (325) 486-6633
E-Mail: christie.adkins@angelo.edu (please type ‘Bio 2424’ in the subject line) If the email subject line is different from that stated above your email will not receive a reply.
Office Hours: MTWR 11AM-12PM and MR 2PM-3PM; also by appointment (See Blackboard or my office door for my full schedule). You MUST set up via email any appointment during or outside of office hours.

Overview and Learning Outcomes: Welcome to Human Physiology! In this class you will explore topics concerning the normal functions of the human body’s cells, tissues, organs, and organ systems (see schedule).

PLEASE NOTE: BIOL 2324 and BIOL 2124 are co-requisite courses. To earn credit, enrollment in both classes this semester is required.

A successful student in Human Physiology should be able to achieve the following course and state core related learning outcomes:

- locate, identify, and functionally describe the structures of the human body at all levels of organization (i.e. recall content) = CT1, EIQS1, EQS2 – Assessment = In class activities, lecture exams, embedded test questions, lab exams, and lab activities/reports
- develop understanding of the functional relationships of anatomical structures to one another (at all levels of organization) in health and communicate the acquired knowledge in written form. (i.e. comprehend the material). CS1 – Assessment = In class activities, lecture exams, embedded test questions, lab exams, and lab activities/reports
- perform laboratory investigations in which numerical physical and chemical physiological data pertaining to tissue function are collected, classified, and analyzed in order to reach an informed conclusive interpretation about relevant clinical scenarios and “real-world” applications. EQS1 – Assessment = In class activities, lecture exams, embedded test questions, lab exams, and lab activities/reports work effectively with others to support and accomplish a shared goal = CS1, TW2 – Assessment = In class activities, lecture exams, embedded test questions, lab practical exams, and lab activities/reports
- connect what she/he is learning to her/his own field (i.e. to make physiology relevant to your own academic endeavors). Assessment = In class activities, lecture exams, embedded test questions, lab exams, and lab activities/reports

In other words, you should be able to:

- describe and explain the normal function of the cells, tissues, organs, and organ systems of the human body to help prepare you for a career in your chosen field (e.g. to gain content knowledge and comprehension).
- connect what you have learned to your own academic field (e.g. to make physiology relevant to your own academic endeavors).
- apply what you have learned to evaluate various case-studies, analyze controversial topics, and to solve problems relevant to physiology and to your field (e.g. to learn how to ask questions, work with others, and apply information you have learned in different situations).

For State, and Accreditation purposes this course will assess your ability to:

- CT1: Gather, analyze, evaluate, and synthesize information relevant to a question or issue
- CS1: Develop, interpret, and express ideas through effective written communication.
- EQS1: Manipulate and analyze numerical data and arrive at an informed conclusion.
- EQS2: Manipulate and analyze observable facts and arrive at an informed conclusion.
- TW2: Work effectively with others to support and accomplish a shared goal.

Physiology requires a deeper conceptual understanding of the material rather than the simple memorization of facts you may have encountered in anatomy. To achieve these objectives and help maximize your learning, it is vital that you:

1) attend lecture and lab regularly (i.e. every time each meet)
2) arrive prepared (have completed any assigned interactive physiology homework modules or textbook readings for lecture)
3) read ALL lab materials BEFORE attending lab each week.
4) study the material every day
5) practice self-assessment often (complete ALL MAP homework activities or Top Hat quizzes/assignments)

To facilitate your comprehension and the study of the material, the course has been designed so that the textbook, lab manual, and online resources (PhysioEx and Interactive Physiology (I.P.)) will be an integral part of your learning experience in human physiology. Successful students are those who use these resources to their fullest potential regularly and complete all assignments.
To get the most from class meetings one must be prepared for them. It is your responsibility to read the text and complete the assignments related to lectures and laboratory activities BEFORE you come to class. Not only will these help to prepare you for class, you will have a better understand the material. In this way, time spent in class can be devoted to gaining a better understanding of the content, rather than being introduced to it for the very first time. A major portion of every exam will be based directly upon these assignments and review materials.

It takes time to truly understand it and to learn physiology.
Set aside time each day to review notes, read the textbook or lab guide, and do not get behind! Don’t wait for time to materialize to study...make the time to study physiology a priority. As a member of the class you are:

- expected to attend and be prepared for all lecture and lab meetings.
- actively take hand-written or typed lecture notes from my personal PowerPoint presentations (absolutely NO cell phone or tablet camera photos or videos are allowed for note taking), anything written on the chalkboard, and anything that is verbally spoken (i.e. what is NOT in the PowerPoints or written on the chalkboard)
- required to follow all directions/instructions both written and spoken.
- invited to ask questions (at the proper time of course), no matter how naive they seem to you. There are probably at least two other folks who have the same question. The only stupid question is one that isn’t really thought about before asking or is asked at an inappropriate time.
- encouraged to ask for help and/or clarification. Don’t suffer in silence. I can’t help you learn if I don’t know you’re confused or if my instructions are unclear.
- Form study groups. Group learning can be powerful and is often beneficial in a course like physiology.

Required Materials:
2. No Laboratory Manual purchase is required this semester. But, you MUST BE ABLE to access the ASU Blackboard Course page for the laboratory portion of this course AND check it frequently for all information, lab protocols, assignments, review guides, etc. Essentially ANYTHING you will need for lab, in the way of printed information, references, or instructions related to lab will be posted on/accessed through this page.

- *** Note: You must complete the ASU.labsafety: Lab Safety and Chemical Hygiene Training course on Blackboard. You cannot attend lab unless you take and pass the required safety training with at least a 90%. It must be completed by the 2nd lab meeting.
3. Mastering A&P (MAP) online access - available using the access code provided with the purchase of the Silverthorn Textbook bundle. Via the “My A&P Study Area” of MAP you will heavily utilize the following:
   - A. Interactive Physiology (IP) (hard copy also provided with the Human Physiology bundle)
   - B. PhysioEx: Laboratory Simulations (accessed through Mastering A & P)

** Note that MAP is also available for separate online purchase, if you are using a used copy of the textbook. (See your instructor before purchasing, if you have any questions)

4. TopHat Response System – Mobile/Electronic device driven platform that we will use in lecture for attendance, in lecture quizzes, and limited out of lecture homework activities. More information to follow via email and in class (or go to http://tophat.com). The Top Hat Join Code will be provided the first day of lecture.
5. You will also need an inexpensive calculator that does basic math functions. Cell phones will NOT BE ALLOWED to be used as calculators on quizzes or exams. It's best not to count on having one available or borrowing one from someone else in your class.
6. INTERNET ACCESS IS REQUIRED for this course. Lecture and lab materials will be distributed routinely via the internet on Blackboard. In addition to many lecture and lab resources, there are many study tips and strategies that you may find useful in your studies. You may access the web free at any computer lab on campus and from home. For more information call the Informational technology department at 942-2911.

- You are required to have a Blackboard account and an official ASU email address. I will use these to make announcements, distribute materials (lecture notes, outlines, handouts, and exam checklists) and post grades. You can access blackboard 24/7 at http://blackboard.angelo.edu. Please visit the site regularly. If you have not used Blackboard before, you may wish to review the tutorial by selecting “the help” icon or call the ASU Technology Service Center at 942-2911 (MCS-111) for assistance.

GRADE DETERMINATION: Your grade is based on the total point accumulation (not percentages) you earn on all activities and examinations in both lecture and lab, bringing the total number of available points to 1100. In lecture and lab each student will have an opportunity to earn points on formal exams. In lecture students can earn various activity points, both in and outside of lecture. Completion of Mastering A&P assignments and other activities where participation is necessary are also required to earn points (see below). Any points earned on these activities will be added to the student's point total in the course. At the end of the semester all points (lecture, lab, and activity) are added together.
Please note I DO NOT curve exams or final grades nor are they negotiable (i.e. an 899.94 pts = B; 599.94 pts = F, etc).

Grades will be changed only if you can demonstrate (with verifiable evidence) that there was an error in how the grade was calculated or an incorrect grade was entered, but once the grade is posted on Blackboard you have only 48 hours to challenge it. (At the end of the semester is too late). See ‘regrading procedures’ below for a more complete explanation of how to do this. All students will be treated equally and fairly, and all grades will be calculated in the same way, regardless of extenuating circumstances or any reason not related to your actual performance in the course. However, as much as I may sympathize with your personal circumstances, I never consider them to be a basis for grade assignments.

Extra activity points, along with the Earned Incidental/Emergency/Bonus points, serve as an extremely generous, built-in curve. I strongly encourage you to take advantage of ALL activity points when they become available, because once assigned (and the deadline has past) they cannot be made up. Therefore you should always attend class and strive to do your best, so that you may EARN the grade you want. It is your responsibility to keep up with your point total. Don’t worry I will help if you just ask! However, do keep in mind that I respond poorly to point grubbing.

Final grades are assigned according to the following scale:

<table>
<thead>
<tr>
<th>Course Component</th>
<th>Maximum Points Available</th>
<th>Grading Scale</th>
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<tbody>
<tr>
<td><strong>EXAMS</strong></td>
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<tr>
<td>Laboratory Exams (3 @ 150 each)</td>
<td>450 points</td>
<td>900 or more = A</td>
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<tr>
<td>Lecture Exams (4 @ 125 each)</td>
<td>500 points</td>
<td>800-899 = B</td>
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<tr>
<td><strong>ACTIVITY POINTS</strong></td>
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<tr>
<td>Lecture based MAP Activities, in class activities/quizzes, exam bonus points, etc.</td>
<td>150 points (Various Point Values)</td>
<td>600-699 = D</td>
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<tr>
<td><strong>TOTAL</strong></td>
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<td>599 or less = F</td>
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<td></td>
<td><strong>1100 possible points total</strong></td>
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**Note that if perfect scores are earned on all assignments it is possible to earn a grade of A+ (i.e. 110 % !)**

Due to the volume of students we have, it is your responsibility to keep up with your grades. ASU Blackboard will be used to permit monitoring of grades. Grades will be posted to the ASU Blackboard Course page and you will have access to them immediately after they have been posted. Please allow at least one week for grades to be posted; some may take longer than one week.

ASSESSMENT MEASURES:

Exam Days: On exam days, you will need a couple of good #2 pencils with erasers. I will provide you with all other testing materials. You will also be expected to adhere to the following guidelines: electronic devices such as cell phones (or CELLPHONES used as calculators), MP3 players (iPods), pagers, personal stereos, palm pilots, tablets (iPads or similar), laptops, recording devices, etc. are not allowed. You will not be allowed to carry your electronic device on your person during the exam (i.e. put them in your backpack, bag, or purse). If you have these on your person or they go off during the exam, you will receive a NEW FOR THE EXAM IN QUESTION AND BE DISMISSED FROM CLASS. Please arrive as early as possible. The exam will begin promptly after the previous class is dismissed. No talking is allowed once I begin to hand out the exam. You will also not be allowed to leave during the exam. If you leave before completing the exam, you will have to turn in in incomplete. If you have a question before the exam, wait until the exam has been handed out to all students before you ask. If you have a question during the exam, please raise your hand (and meet me in the aisle or at the front of the room, if possible). Please see me before the first exam, if you anticipate any problems with the procedures outlined above.

Laboratory Exams: Your lab performance will be assessed by 3 exams (150 points each for a total of 450 points). These will be discussed in more detail by your lab instructor.

Lecture Exams: In lecture your performance will be assessed by 4 lecture exams (see schedule) worth 125 points each for a total of 500 points. Lecture exams will assess your knowledge, comprehension, and application of the material presented in lecture and on-line, readings, or other in-class or out-of-class assignments, including MAP and Top Hat material, made since the previous
exam. A portion or your exams will assess your application of the content in the form of problems that will be assigned in advance from your Exam Checklists discussion questions via Top Hat. The format of all the exams will be multiple-choice. Tentative exam dates are given in the schedule. Exams are designed to be completed in a 50-minute time frame. All students are required to take 4 (and ONLY 4) lecture exams. If you miss an exam follow the instructions below. There will be one, and only one, exam given during the final exam period, unless you are required to take the Comprehensive Make-up Exam.

<table>
<thead>
<tr>
<th>Tentative Lecture Exam Dates:</th>
<th>My Score =</th>
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<tbody>
<tr>
<td>Lecture Exam 1 – 24 September (Tuesday)</td>
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<td>Lecture Exam 2 – 24 October (Thursday)</td>
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<td>Lecture Exam 3 – 14 November (Thursday)</td>
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<td>Lecture Exam 4 – 12 December (Thursday) 8am-10m</td>
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Note: All students are required to take Exam 4.

***Special Note: The Comprehensive Replacement Exam will be given after Exam 4 is completed. ONLY students making up Exam 1, 2, or 3 are required (or can take) this exam.

Lecture Make-Up Exams:

− Lecture make-up exams (for individual exams 1, 2, 3 or 4) will NOT be provided, but read on…

− If you miss a lecture exam for any reason you will be required to take a Comprehensive Replacement (make-up) Exam after taking your final Exam 4. If you do not take this comprehensive exam, a grade of zero (0) will remain entered for the exam missed. The grade earned on the comprehensive replacement exam will serve as the replacement for the missed exam. You must notify me within 48 hours if you miss an exam and need to take the Comprehensive Replacement Exam.

− The Comprehensive make-up exam will cover any/all material presented and assigned from the beginning of the semester, and thus includes any material covered on the first three major exams. The format will be 75-100 multiple choice questions. If you are required to take the comprehensive exam to make-up a missed exam, that score, replaces the zero grade on only one exam: exam 1, 2, or 3.

− All students are required to take the lecture exam 4. Your score on the optional comprehensive exam CAN NOT replace the score for major lecture exam 4. The Comprehensive Replacement Exam can only replace one of the first three lecture exams.

− Failure to follow the procedures outlined for “lecture make-up exams” will result in denial of the opportunity to take a make-up exam and result in a score of zero for the exam in question. Students will not be permitted more than one make-up exam per semester in this manner.

Re-grading Procedures: A copy of an “answer key” of each lecture exam will be made available IN MY OFFICE after it has been graded and returned. You are encouraged to review the “key copy” IN MY OFFICE to learn from your mistakes. You are also encouraged to confer with me via the outlined procedure below if you have concerns regarding your exam once you have compared your work to the key. To report calculation or grading errors on your exam, you are required to follow the Procedures for Re-grading shown below. Activity quizzes and assignments are not subject to re-grading, but math errors only.

1. If the error is strictly a mathematical error:
   • staple a note to your /exam which reads “math only” & turn it in to your instructor for a grade recalculation.

2. If you believe you have found a grading error:
   • remember that a 1 pt error is at best only .0025 pts on your final course average.
   • remember the exams are photocopied immediately after you turn them in (e.g. I will know if you have changed an answer). It is an expense I wish I did not feel compelled to bear.
   • study the key before you request that any question(s) be re-graded. You must clearly state your reason(s) for thinking the question has been graded incorrectly in a neatly written, attached note. “Question X is graded wrong or I deserve more points on question Y” are not reasons. This means I expect a clearly delineated/thoughtful reason based on verifiable factual information that your answer is correct (i.e. from a reputable source like your text or lab manual). This means I expect a short paragraph for each error along with specific page references.
   • Staple your justification to your exam and turn it in to me. Understand I will be very fair and accurate, but the entire exam will be re-graded AND if the resulting grade is lower than the previous, the second grade will replace the first.

3. The deadline for requesting any recalculating or re-grading is 48 hours following the posting of the grade on Black board...No Exceptions.

Lecture Activities/Assignments/Quizzes: Quizzes and assignments (in class or out) will cover material presented in lecture (or from other sources) and may be incorporated into each lecture exam. Some will be given randomly in lecture to encourage you to attend class regularly, keep up with the material, and to provide a means of self-assessment. The question format of quizzes will closely resemble that of the lecture exams, so it will give you the opportunity to “practice taking the exams” before they are given….and hopefully rectify any deficiencies in your learning. Quizzes will consist of a varying number of multiple-choice questions and cover material presented in all lecture notes, EOC review questions, PhysioEx, and/or IP assignment modules. Any
ATTENDANCE POLICY: Attendance will affect your success in the course. You are required to be in class every day and are responsible for all information given. ASU requires that attendance be checked at each class meeting. Via Top Hat a randomly generated attendance code will be generated at the beginning of the meeting. You must enter the attendance code into your Top Hat application. If you arrive late, it is your responsibility to locate and enter the attendance code. Anyone who does not enter the attendance code at each day's meeting will be counted absent. You must stay for the entire lecture to get credit for attendance. Other means of taking attendance will also be used to cross reference the roll sheet. I do not give points for perfect attendance nor do I subtract points for excessive absences. Attendance will affect your grade in this course however. You penalize yourself on exams when you miss class simply because you are missing learning opportunities. For example, activity opportunities given in-class cannot be made up. Plus on average, students who miss a single lecture class score 6-8% lower than the class average on exam scores. This decreases about another 6-8% for missing two classes. Missing more than two lecture classes virtually guarantees a very poor exam score. In general, it is true that students who exhibit erratic attendance do not perform to their full potential and may be perceived as having a lack of interest in completing the course. If a situation exists which is causing you to miss an excessively, I encourage you to discuss the situation with me. Excessive absences are required by the university to be reported to the Registrar’s Office, the Dean of Student Life and/or the department head of your declared major. If you are an athlete, the NCAA compliance officer and your coach will be contacted. Contrary to popular belief, a student who fails to attend class is not automatically withdrawn from a course and will receive a grade that represents their performance throughout the entire semester.

Academic Honesty/Plagiarism/Cheating: No form of academic dishonesty will be tolerated. Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding and following the ASU policies on academic dishonesty contained in both print and web versions of the Student Handbook. Students in this class are expected to submit work in accordance with the guidelines of academic honesty provided by the handbook and/or their instructor. The penalty for ANY act of academic dishonesty is a grade of ZERO on the assignment and disciplinary action as warranted by the university guidelines that includes dismissal from ASU.

Angelo State University – Honor Code: ASU expects its students to maintain complete honesty and integrity in all of their academic pursuits. Students are responsible for understanding and following the Academic Honor Code as outlined on the university’s web site and in the Student Handbook.

Withdrawal From the Course: Contrary to what many students believe, you are not automatically withdrawn from a course if you cease to attend lectures or labs. If you wish to discontinue participation human physiology you must formally withdraw by, first seeing your lecture instructor and then completing the online Course Drop Form. Dropping the lecture automatically drops the lab, so no separate Course Drop Form is necessary. Failure to do this can result in a grade of F appearing on your academic transcript. Again, dropping the lecture automatically drops the lab. The last day to withdraw from classes or the University for the Fall 2019 semester is Thursday, 31 October.

Special Needs/Disability Statement: Persons with disabilities which may warrant academic accommodations must contact the Student Life Office, Room 112 University Center, in order to request and to implement academic accommodations. Angelo State University is committed to the principle that no qualified person shall, on the basis of disability, be excluded from the participation in or be denied the benefits of the services, programs, or activities of the University, as required by the Americans with Disability Act of 1990. However, all students at Angelo State University must have the capacity and ambition to undertake, with reasonable assistance from the faculty and administration, the academic challenges necessary to fulfill the academic requirements for the degree or certification programs they are pursuing. Any accommodations will require documented, verifiable evidence from an accredited professional. If you believe your success in the course is at risk due to a disability, it is your responsibility to arrange a meeting with me by the end of the first week of classes, so that we may further assess your situation. I will work with you to provide reasonable accommodations so that you have a fair opportunity to perform successfully in this class, but only if you take responsibility. (Right before a quiz or an exam IS not taking responsibility. You must meet with me well in advance, so that I may help you.)

Religious Holy Day: A student who intends to observe a religious holy day should make that intention known in writing to the
instructor prior to the absence AND the first week of classes. Any make-up assignments will need to be completed and turned in in advance. If an exam is missed, see Make-Up exams above.

**TITLE IX AT ANGELO STATE UNIVERSITY:** Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. In accordance with Title VII, Title IX, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination Act (SaVE), and other federal and state laws, the University prohibits discrimination based on sex, which includes pregnancy, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination and unwelcome behavior of a sexual nature. The term includes sexual harassment, nonconsensual sexual contact, nonconsensual sexual intercourse, sexual assault, sexual exploitation, stalking, public indecency, interpersonal violence (domestic violence or dating violence), sexual violence, and any other misconduct based on sex. You are encouraged to report any incidents involving sexual misconduct to the Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator, Michelle Boone, J.D. You may submit reports in the following manner: Online: www.angelo.edu/incident-form or Face to Face: Mayer Administration Building, Room 210 Phone: 325-942-2022 E-Mail: michelle.boone@angelo.edu Note, as a faculty member at Angelo State, I am a mandatory reporter and must report incidents involving sexual misconduct to the Title IX Coordinator. Should you wish to speak to someone in confidence about an issue, you may contact the University Counseling Center (325-942-2371), the 24-Hour Crisis Helpline (325-486-6345), or the University Health Clinic (325-942-2171). For more information about resources related to sexual misconduct, Title IX, or Angelo State’s policy please visit: www.angelo.edu/title-ix

**Electronic devices** such as cell phones (used in conversation, camera, or video mode), pagers, iPods, etc. are not allowed to operate (i.e. ring/play/talk/text/video or camera use) during formal lecture. You will also NOT be allowed to carry them during exams either. No exceptions. After an initial warning, five points will be deducted from your point total for each time they ring/chime/take a photo, etc. or you talk on them during class. If you carry them during an exam you will automatically receive a ZERO AND will be immediately dismissed from class. The uses of such devices are considered by the biology department to be a disruption as well as a distraction to your fellow students and to the instructor. If the disruptive behavior continues, you will be reported to the Dean of Student Life and your department head. If you would like to use typed/audio recording devices such as tape/digital recorders, laptops, tablets, or smartphones (used as tablets or laptops would be used, not in conversation, video, or camera mode) during lecture only, please ask.

**Bio 2324 Human Physiology – Fall 2019**

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<tr>
<th><strong>Topic(s):</strong></th>
<th><strong>Textbook Reference:</strong></th>
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<td>Course Policies, Tips and Intro to Science &amp; Physiology</td>
<td>Ch.1</td>
</tr>
<tr>
<td>Tissues/Organ Systems, Characteristics of Life and Homeostasis</td>
<td>Ch.3, 6</td>
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<td>Cell Physiology:</td>
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<td>Organization and Biochemistry, Cell Structure and Function ^</td>
<td>Ch.2, 3</td>
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<td>Cell Metabolism &amp; Metabolic Principles</td>
<td>Ch.4, 22</td>
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<td>Digestive Physiology</td>
<td>Ch.21</td>
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<tr>
<td>Nervous System Physiology:</td>
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<tr>
<td>Nervous Tissue &amp; Organization Overview^</td>
<td>Ch.8</td>
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<tr>
<td>Membrane Potentials and Impulse Communication, Nerve Impulse Conduction</td>
<td>Ch.5, 8</td>
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<tr>
<td>Central Nervous System (Functional Regions^)</td>
<td>Ch.9</td>
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<td>Sensory Physiology: General and Special</td>
<td>Ch.10</td>
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<td>Peripheral Nervous System (Somatic, Enteric, Autonomic)</td>
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<td>Muscle Physiology and Control of Body Movement</td>
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<td>Respiratory Physiology, Gas Exchange &amp; Transport</td>
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<td>Kidney Physiology, Fluid &amp; Electrolyte Balance</td>
<td>Ch.19, 20</td>
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<tr>
<td>Reproductive Physiology</td>
<td>Ch.26</td>
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<tr>
<td>Endocrine and Immune Systems Overview</td>
<td>Ch.7, 23, 24</td>
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** Topics appear in the approximate order in which they will be covered.  
^ This content is assumed knowledge covered in Bio 2423 (or prior coursework)  
^ Independent review of this material in conjunction with class work is highly recommended