Human Physiology is the study of how the human body works. It describes the chemistry and physics behind
basic body functions, from how molecules behave in cells to how systems of organs work together

You are about to embark on a fascinating journey that will take you through an amazing exploration of the
human body. Today we know more about the body than ever before and it is truly an exciting time to be
taking this class. Just think how you'll be able to impress and educate your friends with your vast knowledge
of how the human body works at the end of this course! In this class you will explore topics concerning the
normal functions of the human bodies’ cells, tissues, organs, and organ systems

As a successful student of human physiology you should achieve the following Student Learning Outcomes:
 - 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).

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 class
2) arrive prepared
3) study the material every day
4) practice some form of self-assessment often

This is a course designed for students who are biology majors or are pursuing a nursing or allied health degree.

The class will be conducted at college level and students are expected to work accordingly. Students will be
expected to come to class both prepared and on time. The overall success of the program depends mostly on
each student meeting their individual responsibilities. Much of this course will be covered in the classroom,
but much of it will be covered independently by each student. Allowances should be made for substantial study
time.
<table>
<thead>
<tr>
<th>Unit</th>
<th>Unit Name</th>
<th>Chapter(s)</th>
<th>Days Covered</th>
<th>Coloring Book Plates</th>
<th>Quiz/Exam Date (Tentative)</th>
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<td>Homeostasis</td>
<td>1.1, 1.3, 1.4, 1.5</td>
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<tr>
<td>2a</td>
<td>Cell Physiology: Membrane Transport</td>
<td>3.1</td>
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<td>2b</td>
<td>Cell Physiology: Cellular Metabolism &amp; Metabolic Principles</td>
<td>24.1, 24.2</td>
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<td>1/28 (exam #1)</td>
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<td>3a</td>
<td>Nervous System Physiology: Membrane Potentials and Impulse Communication</td>
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<td>Nervous System Physiology: Nerve Impulse Conduction</td>
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<td>4</td>
<td>Muscle Physiology: Control of Body Movements</td>
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<td>5a</td>
<td>Cardiovascular Physiology: Cardiac Physiology</td>
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<td>5b</td>
<td>Cardiovascular Physiology: Blood Flow and Pressure</td>
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<tr>
<td>5c</td>
<td>Cardiovascular Physiology: Blood</td>
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<td>6</td>
<td>Respiratory Physiology: Gas Exchange and Transport</td>
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Textbook
1. We will be using OpenStax Human Anatomy and Physiology. You can download a free PDF of the entire book or purchase a hard copy here. OpenStax Human Anatomy and Physiology
2. We will also be utilizing Kapit and Elson (1999) The Physiology Coloring Book 2nd edition. I will provide copies, but you are welcome to purchase your own copy. Physiology Coloring Book, The (9780321036636): Kapit, Wynn, Macey, Robert, Meisami, Esmail: Books

Laboratory
Since we only have 49 minutes per class per day we will be conducting labs over the course of ideally one but up to 3 days. Due to the unpredictable nature of science labs there may be occasions where you will be asked to remain after class to finish a lab or to clean up a lab, etc. My hopes are that this will be rare. Also, on some rare and unpredictable occasions, lab items may have to sit overnight and have measurements taken first thing in the morning. I will be at school early most mornings and can be easily found in the classroom or nearby. Again, this is a college course and therefore is heavily influenced and weighted by the labs. 100% participation in all labs is both expected and required.

For each lab students will be required to analyze data and conduct a concise write-up of background, methods, materials, data collected, and conclusions made from analyzing the data. After a lab is done and questions are answered, we will be reviewing what we learned and the overall lesson learned and purpose of each lab. Toward the end of the year students will be expected to complete full lab write-ups.

Class Supplies
All students should maintain an orderly notebook organized as you wish. At a minimum please obtain the following by the first full week of school:
- Notebook paper
- 2 inch three-ring binder
- Facial Tissues
- Clorox wipes (if available)
- Color pencils
Grading
Grading is approximately as follows:

<table>
<thead>
<tr>
<th>Major 60%</th>
<th>Quizzes 20%</th>
<th>Lab 10%</th>
<th>Homework 5%</th>
<th>Classwork 5%</th>
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**Spelling Counts**
You will be expected to spell all terms correctly on all practicals. One-quarter to full credit will be taken off for spelling mistakes. For example if it changes the meaning of the word, full credit will be taken off (e.g humerus vs. humorous). Any partial credit for almost correct answers will be awarded at my discretion. Besides the basic reason of education, why does spelling count? Confusion may arise from imprecision. Many anatomical/medical terms are similar—they may even have the same Latin & Greek roots. Would you like your pharmacist to misread your prescription? A misspelled word on a patient's chart can lead to a disaster: legal as well as health-wise.

**Corrections**
All failing grades that are turned in complete and on-time can be corrected for an improved grade. Assignments turned in late are not eligible for corrections. To correct a minor grade you must first fill out a minor grade correction form and plan a meeting with Mr. Carrell. Major grade corrections will be assigned in class.

**Common Complaints**
I included this little section to mention a couple of the common pitfalls of dual credit classes. READ THE BOOK. There is no substitute for sitting down, turning off the radio/TV, turning up the lights, turning off the computer, shutting off your cell phone and reading. Showing up for tests thinking you'll just “wing it” will result in failure, guaranteed.

There will be students in a million clubs/sports that score the highest in class or on the exams despite their hectic schedule, and there will be students with zero clubs/sports that will get a failing grade. The choice seems to lie within you somewhere. No one can prepare you for this class and exams better than yourself.

Common traits of high performing students: Organized, reading ahead, answering questions in class, positive outlook, focusing on work at hand.

Common traits of poorly performing students: Disorganized, never reading chapters, no homework done, dead quiet in class discussions. Not doing homework, participating, labs, or blowing off quizzes doesn’t just take away the 20%. It affects the entire grade because you chose not to learn the material.

**Cell Phones**
As a classroom rule, students will be required to turn in their phone as they enter the classroom. The choice to not turn in your phone will result in an office referral...period. During some labs one student per group will be allowed to have their phone in order to photograph the steps of the lab to include in their lab write up. The only other time students should have their phone is if I directly specify we are going to use them. I reserve the right to revoke the privilege to use your phone during lab or other activities if you are found using it for anything other than working on the lab or assignment at hand.

**Discipline**
Acting out in class, unsafe laboratory behavior, bullying, disrespectful language, and misbehavior in general will result in swift repercussions. I will ask you **once** to cease the behavior. Any subsequent issues will be given an office referral. No exceptions or excuses.

**Contact**
The easiest way to contact me will be through email: eccarrell@llanoisd.org or stopping by my room. I will try to respond the same day but delays may occur depending on circumstances at the time. I understand the difficulty of this course and that everyone learns differently. Even if you just need encouragement stop by my room and we'll talk through it.

**University Policy**

**Academic Honesty and the ASU Honor Code**
Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding the Academic Honor Code and the ASU policies on academic dishonesty, which is contained in both print and web versions of the Student Handbook. The penalty for ANY act of dishonesty in this class, including any form of cheating or plagiarism: 1) is a grade of ZERO on the assignment and, 2) disciplinary action as warranted in accordance with university guidelines. Please do NOT jeopardize your career; it's not worth it.

**Accommodations for students with disabilities**
All students at Angelo State must have the capacity to undertake, with reasonable assistance from the faculty and administration, the academic challenges necessary to fulfill the academic requirements for the degree for certification programs that they are pursuing. If you have a disability and need special accommodations of any nature, you should contact the Student Life Office (Garden Level, University Center, (325) 942-2191 or Student.Life@angelo.edu). I will be happy to make accommodations for you based on the recommendations from the Student Life Office. Please make your request early in the semester to allow time for appropriate arrangements.

**Religious Holy Day**
A student who intends to observe a religious holy day during the semester should make that intention known in writing to the instructor during the first week of the semester and one week prior to the absence. If this submission is completed, a student who is absent from classes for the observance of a religious holy day shall be allowed to take make up missed exams or assignments scheduled for that day in accordance with syllabus policy.

**Title IX**
Angelo State University is committed to the safety and security of all students. If you or someone you know experience sexual harassment, sexual assault, domestic or dating violence, stalking, or discrimination, you may contact ASU’s Title IX Coordinator.

**Human Physiology Laboratory Safety Contract**
1. The science laboratory can provide you with the exciting opportunity to do science. However, remember at all times that the laboratory is a place for serious work. Fooling around or disruptive behavior can result in removal from the laboratory.

2. Always prepare for an experiment by reading the directions in the manual before you come to the laboratory. Follow the directions carefully and intelligently, noting all precautions. Do not add to, omit, or change any of the directions unless your teacher instructs you to do so.

3. Do only the experiments assigned or approved by your instructor. Unauthorized experiments are prohibited.

4. When working with corrosive materials, chemical splash goggles, gloves, and lab aprons must be worn throughout the lab period until all your classmates have completed the lab and the chemicals are safely stored. When the teacher’s protective equipment is on, your protective equipment is on. When the teacher takes off his or her protective equipment, you can take off your protective equipment.

5. Do not touch chemicals with your hands.

6. Never taste a chemical or solution. No food or drink is allowed in the laboratory. You may have a drink with a lid at your desk, NOT YOUR LAB TABLE.

7. When observing the odor of a substance, do not hold your face directly over the container. To observe safely, fan a little of the vapor toward you by sweeping your hand over the top of the container.

8. Allow ample time for hot glass to cool. Remember that hot glass looks the same as cool glass.

9. Know the location of the blanket station, emergency shower, eyewash, and the fire exit procedure. Know the location of the material safety data sheet (MSDS) notebook for reference in the event of an accident.

10. Know the location of your school's MSDS. MSDS information must be shared with students by the instructor or read by students, specifically those sections detailing handling precautions, disposal techniques, and other pertinent information for each chemical.

11. Report any accident, even a minor injury, to your instructor.

12. Discard all waste from lab activities into a chemical waste jar or other location specified by the teacher in accordance with MSDS instructions.
13. Read the label on any chemical bottle you are planning to use in a lab to verify that it contains the correct chemical. Do not use any chemicals stored in unlabeled bottles.

14. Never return unused chemicals to the stock bottle. Do not put any object into a reagent bottle except the dropper with which it may be equipped.

15. Keep your apparatus and work area organized. Avoid spillage, but if you do spill something, notify the teacher and clean up the spill immediately using the appropriate technique.

16. During clean-up time, attend to your assigned area duties. All duties must be completed before leaving the laboratory. Wash hands thoroughly with soap at the conclusion of each lab.

17. Respect your equipment and fellow laboratory workers.

18. You are not allowed to work in a laboratory unless an instructor is present. All student experiments are to be done under the direct supervision of an instructor. Students completing science project assignments at home must complete a permission form before any work is begun, and a parent or guardian must sign the form.

19. Open-toed shoes/sandals, loose-fitting clothing, and jewelry are not permitted during laboratory activities. Long hair must be tied back securely during laboratory activities.

20. Books and notebooks are to be stored on your desk for clear aisles and exiting. Backpacks need to be placed in your chair at your desk. No backpacks are allowed in the lab side of the room.

21. Science department regulation and State statutes require that all students, teachers, and visitors in the laboratory must wear chemical splash goggles during work periods, including clean-up time.

22. One student per lab group may be the designated photographer and have their phone during labs. Phones are to be locked and stored unless your instructor gives you permission to have them.
Any person who is working, teaching, observing, supervising, assisting or engaging in any work, activity or study in a public or private elementary or secondary school laboratory or workshop where the process used tends to damage the eyes or where protective devices can reduce the risk of injury to the eyes concomitant with such activity shall wear an eye protective device of industrial quality in the manner in which such device was intended to be worn. When in doubt, wear chemical splash goggles.

**In order to maintain a safe working environment for all occupants, teachers are required by the school administrator to remove from the classroom, any student out of compliance. This is for your own protection and fellow students.**

Sign below to signify that you have read, understand and agree to abide by the guidelines for this classroom.

Parent/guardian please complete the following:

Student Name: ________________________________________________________________

Course: 2324/2124 - Human Physiology

Student Signature:______________________________________________________________

Preferred/Guardian Name:_______________________________________________________

Parent/Guardian Signature: _____________________________________________________

Best method to contact parent/guardian (provide either email, phone, or both):
____________________________________________________________________________
____________________________________________________________________________

o I have read the attached safety rules and have been present when they were discussed in class or I discussed them directly with my science teacher.

o Yes, I wear contact lenses.

I have allergies/sensitivities to:
____________________________________________________________________________

I have read and discussed the laboratory safety rules with my child.

Parent signature ______________________________

Date ________________