Anatomy & Physiology Course Syllabus

School Year: 2026-2027

Teacher: Dr. Frank Armato

"God created male and female in His own image. In His image God created them." Genesis 1:27

E-MAIL ADDRESS (Best and easiest way):	Farmato@spxkc.org
CELL PHONE	816-728-0564
AVAILABILITY (Text or Email)	7:00am-8pm Monday-Friday. Saturday 8am-4pm
TUTORING	Schedule before/after school or during Study Hall

COURSE DESCRIPTION

Anatomy & Physiology is designed for students to acquire basic knowledge of the structure and an understanding of functions of the cells, tissues, organs, and systems of the human body. Anatomy is the science of understanding the structure and the parts of living organisms. Physiology, on the other hand, deals with the internal mechanisms and the processes that work towards sustaining life. These can include biochemical and physical interactions between various factors and components in our body. Scientific methodology is incorporated in each classroom initiative, along with substantial anatomical names and terminology. These skills are intended to introduce students to general terms. The methodology, terms and concepts may also serve as an introduction to students interested in biological and health related careers. This class is filled with lectures, worksheets, class collaboration, memorization and chapter reading. Each are encouraged and will contribute to the success of your grade.

LEARNING OUTCOMES **Fall Semester**

1. **Levels of Organization**

   Introduction to Human Anatomy & Physiology - Chapter reading pgs. 6-24
   - Differentiating Human Anatomy & Physiology
   - Levels of Organizations
   - Anatomical Terminology

2. **Support and Movement**

   Integumentary System - Chapter reading pgs. 162-175
   - Epidermis, dermis, and sensory receptors for touch
   - Skin appendages; including hair, nails, and glands (sebaceous, eccrine, and apocrine)
   - Skin-related diseases and treatments

   Skeletal System - Chapter reading pgs. 184-187, 198-207, 214-216, 219-222
   - Major bones in the axial and appendicular skeletons
   - Classification & structure of bones
   - Bone remodeling and fracture repair

3. **Muscular System - Chapter reading pgs. 238-251, 255-272**
   - Major muscles in the body and structure of skeletal muscle tissue
   - Muscle contraction and the sliding filament model
   - Muscles as levers

4. **Nervous System Chapter reading pgs. 288-303, 309-310**
   - Neurons and neuroglia - structure, function, and classification
   - Neuron communication and signal transmission - action potentials, synapses, nerve impulses, etc.
   - Organization of the nervous system - sensory vs. motor, parasympathetic vs. sympathetic

5. **The Brain & Spinal Cord - Chapter reading pgs. 315-338**
   - Parts of the brain and their functions, along with the spinal cord and its function
   - Cranial nerves, and reflexes
   - Related diseases/health issues

6. **The Senses - Chapter reading pgs. 350-381**
    - Structure of the eye
    - Structure of the ear
    - Vision, hearing and equilibrium
    - Olfaction (smell) and gustation (taste)

Spring Semester

7. **Endocrine System - Chapter reading pgs. 390-419**
    - Overall function
    - Use of negative feedback loops and signal transduction pathways
    - Major glands and structures (hypothalamus, pituitary gland, pineal gland, thyroid, parathyroid glands, adrenal glands, pancreas, gonads, and placenta)
    - Lipid-soluble vs. water-soluble hormones
    - Related diseases/health issues

8. **The Blood - Chapter reading pgs. 428-452**
    - Its role in maintaining homeostasis
    - Components of the blood
    - Hematopoiesis & hemostasis
    - Blood types
    - Blood transfusions

9. **Cardiovascular System - Chapter reading pgs. 460-475, 481-487, 493-503**
    - Parts and functions
    - Anatomy and physiology of the heart
    - Major blood vessels
    - Blood flow through the heart and factors that affect it
    - Pulmonary, systemic, and coronary circulation
    - Cardiac cycle
    - Cardiovascular diseases and congenital heart defects
    - Practical skills related to the circulatory system including: taking a pulse, interpreting an electrocardiogram, doing CPR, using an AED, and making a tourniquet

10. **Digestive System and Nutrition - Chapter reading pgs. 544-579, 582-591**
    - Structure and functions of organs in the alimentary canal (mouth, pharynx, esophagus, stomach, small intestine, and large intestine)
    - Functions of the accessory structures (teeth, salivary glands, liver, gallbladder, pancreas)
    - The process of digestion
    - Key digestive enzymes
    - GI health issues and diseases

Team Final Teach Back Presentations

Senior Spring Semester Final Exam

11. **Optional/Respiratory System**
    - Overall function and how it works with the cardiovascular system
    - The physiology of breathing
    - The pathway of an oxygen molecule
    - Gas exchange

Spring Semester Final Exam

TEXT BOOK AND REQUIRED RESOURCES

1. Required for learning: *Hole's Essentials of Human Anatomy and Physiology 2nd Edition 2021 by Charles J. Welsh.* You will check out a textbook at the beginning of the year and be responsible to take care of it.
2. Anatomy & Physiology Notebook: You will need this notebook to write class notes during lecture and store homework worksheets, handouts, and returned exams throughout the semester. You are required to bring your text book and notebook to class each day. Failure to have text books can result in loss of points.

ESSENTIAL STANDARDS & COURSE OBJECTIVES

1. For students to develop a deep understanding of Anatomy & Physiology which will lead to a deep understanding and knowledge about the human body, its functions, and its many complexities.
2. Provide students with rigorous practice in a scientific thinking discipline. This manner of thinking will position students for success in critical thinking and prep for possible science courses in college.
3. To allow students to develop a deep understanding and education base from guest speakers and professionals who have an intricate role and testimonial dealing with the human body.
4. Students will be placed into a designated team where they will contribute throughout the year by owning a specific body system. Throughout the year, teams will have designated class times to collaborate and create a major teach-back presentation to a panel of judges and their peers. Teams will need to engage outside of class period to complete their presentation with a successful outcome. This serves as a major grade at the end of the school year.

DAILY DEVOTIONAL

A brief devotional will be shared at the beginning of each class once the bell rings. If you're tardy during the devotion, you will need to wait in the hall. This is a respectful and attentive time as we begin class. Failure to be respectful during this time can result in a loss of points.

HOMEWORK

Be sure to have all homework assignments completed and brought to class on the due date. Grades will be based on completion on the due date. If you are absent the day homework is due, it's your responsibility to turn it in the day you return back from school. There will be a penalty assessed each day it's not accounted for. It is also your responsibility when absent to check in with me to see what was missed and receive any homework assignments. I'm happy to meet before or after school to share any missed lectures or needed notes.
Late homework turned in: Unexcused tardy: 20% penalty up to 3 days after returning back to school.
Excused: (Open to discussion) **Missing homework not made up: Can earn 50%**

PARTICIPATION/ENGAGEMENT/BEHAVIOR GRADE

Class participation and behavior is a percentage of your overall grade and is largely based on coming to class prepared each day, collaborating and being engaged. Each student will begin the semester with 100 points outlined within Facts. It will be the student's responsibility to maintain their grade during collaborating, volunteering during textbook reading, and answering questions during class. Failure to do so will result in points lost. Lost points can always be earned back based on engagement.

QUIZZES

Beginning week 2, there will be a short recall quiz (10 pts.) on most Fridays. Quizzes are given to test textbook reading assignments, lecture-listening, initiative, and understanding of terms. It will be given the first half of class. If absent on quiz day, it is your responsibility to schedule time with me to get the quiz made up. This will be made up the following day of your return. Failure to do so will result in a 0.

PERFORMANCE ASSESSMENTS

Each unit will have a performance assessment. Since you will be performing, and eventually designing your own experiments, I will be assessing your ability to think critically, articulate an appropriate experimental design, and analyze your data.

LAB REPORTS

Short lab assignments will be given the day of lab work. If you are absent on lab day, a report will be assigned to earn back your lab points. This will need to be completed the following day of return back to school. Failure to complete will result in a 50% grade deduction after the 3rd day and a 0 any time after.

SEMESTER EXAM
A semester exam will be comprehensive in scope. It will focus on all of the topics covered up to that poin

BATHROOM POLICY
If your class takes place directly after lunch; please use restroom prior to class. It is your responsibility to use your free time after lunch to use the restroom. There will be a 3–5-minute break between classes on float days. As per school policy, you need the classroom pass to go to the bathroom or get water. A consistent bathroom request will not be granted, especially at the beginning of class.
****NOTE** I'm flexible. If a student has a documented medical condition which requires him/her to use the bathroom more frequently, please inform me to possibly be exempted from this system.**

TARDINESS/DISRUPTION/BEHAVIOR POLICY
Adhering to school policy, if a student comes in after the bell which begins class, you will need to receive a tardy slip from the office. There will be no warnings. Classroom respect during lecture or when someone is speaking is mandatory. Failure to do so will result in losing points.

You may sit by friends, however, there cannot be talking during class, reviews, lectures, videos, and study time, unless said otherwise. At any time, you will be asked to move.
Any type of disruption or behavior issues during class will result in a lowered participation grade and transfer to the office.

PHONES/PURSES AND BAGS
Phones
This class adheres to school policy and does not allow phones to be used or brought to class unless approved. All phones will be handed in and forwarded to the Assistant Principal's office. There will be no more warnings with this new school policy.
Purses and bags
Purses and bags ARE NOT ALLOWED on the desk. They must be placed on the chair or the floor beside you.

ABSENCES
For your own benefit, it is imperative that you keep pace with the class. You will not master the topics we study otherwise. If you miss a class assignment and have an excused absence then you will have 3 days to submit it. I will not take ANY missed assignments after this one-week deadline. This policy does not apply to the last week of the quarter during which all assignments must be submitted that week in order to count toward the quarter grade. Students with excused absences may earn full credit on work made up within one week

GENERAL
Grades will generally be recorded and on PowerSchool within one week after the assignment date. I will do his best to keep you and your families up to date on your grades in class. If you ever have a question about a grade, email me, contact me via text messaging or schedule a meeting time. Always feel free to reach out with any grade or content related questions.

SUCCESSFUL OUTCOMES:
Empirical studies of high school and college students show that there are three factors that lead to sustained academic success. They are: (1) Attending class and collaborating with your cohort. (2) Handing in assignments on time. (3) Creating a positive and Christ-like social relationships with peers and professors.

SUGGESTIONS FOR SUCCESS

For most students, this will be an extremely challenging course. To be successful be sure to work hard and be as engaged as possible each day in class. I realize healthcare may not be a career you're aspiring towards; however, I reward your initiative taken and your committed work ethic throughout the year.

Additional tips:

1. Complete and study all resources (worksheets, quizzes, handouts) to study for each chapter exam.
2. Commit to giving yourself enough time to complete each assignment.
3. Homework and classwork together make up 40% of your grade. Complete homework assignments on time and attend class every day.
4. Schedule time with me before or after school, or during study hall for if you're stuck and need to review.

SYLLABUS CHANGES

The cadence and outcomes can change at the professor's discretion and class needs based on new curriculum.

I look forward to the opportunity to have you as a student who aspires to deepen their knowledge within the Anatomy & Physiology discipline. Together, we will journey through the year learning critical thinking, exploring future academic and career opportunities, as hosting professional guest speakers.

Dr. Frank Armato
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CUMULATIVE GRADE ALLOCATION (Subject to change):

*10% Homework Worksheet (Chapter)
20% Participation/Behavior (Semester)
10% Labs (2)
15% Quizzes (Weekly)
30% Exams (Chapter)/Semester Finals (2)
15% Final Project Teach Back Presentation (End of the year)
*Homework worksheets will be distributed within the first couple of days at the start of each chapter for completion in order to achieve an optimum homework grade.

Our classroom Bible verse:

"Trust in the Lord with ALL your heart and lean not on your own understanding. In All your ways acknowledge Him and He will make your path straight." Proverbs 3:5-6

Please complete and return for your file

I have read and understand this class syllabus and expectations. I also agree to the school/classroom policy on phones, purses, tardiness, behavior and participation. By signing below, I indicate that I have no questions. I understand each consequence and agree to comply with the policies and expectations set in place for this class.

Anatomy & Physiology
Course Syllabus Signature Page
Please complete the portion below with a parent or guardian and place it in your homework folder.

My parent/guardian, _____ and I, _____,
(Parent/guardian name) (Student name)
have read the 2026-2027 Anatomy & Physiology syllabus in detail. With my signature, I understand and agree with the policies and expectations set in place for this class and will comply with each.

_____ _____
Parent/Guardian Printed Name **Date**

_____
Parent/Guardian Telephone Number(s) and email addresses

If needed, when is the best time to reach you by phone? _____

RESTORE · ALL · THINGS · IN · CHRIST ·