**BIOL2213-02**

# Human Physiology

**Spring 2021**

**Lecture**: T&Th 4:30 – 5:45 in OC Left; **Lab**: Th 6:00-8:00pm in Spencer 229
**INSTRUCTOR:** Dr. Adam Gunn, PT, DPT
**OFFICE:** Lecture 247
**OFFICE HOURS:** Available as needed via email or pre-arranged on campus meeting
**EMAIL:** agunn@uarichmountain.edu

**PREREQUISITES for this course are successful completion Human Anatomy course or instructor permission.**

**RESOURCES:**
**Lecture Text** *Hole's Human Anatomy and Physiology* 14th ed; Shier, Butler, Lewis.
**Optional**-** *Netter's Anatomy Coloring Book Updated Edition (Netter Basic Science)* 2nd Edition
ISBN-10: 0323545033
**Course CONNECT:** https://connect.mheducation.com/class/a-gunn-2020-2021
**Course Description:** Human Physiology is a continuation of the Human Anatomy course designed to meet the needs of premed, pre-nursing, allied health students, exercise physiology students, and other students interested in human body organization. This course includes a study of the function and structure of the remaining organ systems: endocrine, cardiovascular, lymphatic, digestive, respiratory, and urinary, and reproductive systems, including fluid and electrolyte balance; and acid-base balance.

**Face Mask Policy:** As per the Executive Order from the governor of Arkansas, all students are required to wear a proper face covering that completely covers the nose and mouth while on campus and in class. Masks with holes or masks that do not completely cover nose and mouth are not acceptable. Any student that does not have a proper mask will leave class and be referred to the Vice Chancellor for Student Affairs for possible disciplinary action.

**Food and Drink:** Food and drinks, including water are not allowed in the classroom at any time.

**Program outcome and rationale:** The knowledge and critical thinking skills acquired in the general education component enable students to analyze problems, arrive at intelligent conclusions, and make reasoned choices in their professional and personal lives. This course provides a basic, yet comprehensive, knowledge of the human body for any and all medical purposes: to familiarize students with the physiology of the human body, to develop an understanding of the functions of the organ systems including pathologies (diseases) that affect these systems.

**COURSE OBJECTIVES:** Upon completion of this course, the student will be able to:

1. Use appropriate anatomical terminology as it relates to regions, directions, body planes, and cavities of the body.
2. Describe the importance of chemistry and biological molecules associated with general human physiology.
3. Describe the functions and structures of the endocrine system and typical pathologies/medical diagnoses associated with dysfunction of any of the part(s) of this system.
4. Describe the physiology and relevant anatomy of the cardiovascular system(s) and typical pathologies/medical diagnoses associated with dysfunction of any of the part(s) of this system.

5. Describe the anatomy and physiology of the pulmonary/respiratory system and typical pathologies/medical diagnoses associated with dysfunction of any of the part(s) of this system.
6. Describe the physiology and applicable anatomy of the lymphatic and immune system(s) and how they fulfill their associated functions.
7. Describe the physiology and relevant anatomy of the digestive system and how it fulfills its functions.
8. Describe the physiology and applicable anatomy of the urinary system and how it fulfills its functions.
9. Describe the physiology and related anatomy of the reproductive system and how it fulfills its functions.
10. Describe the integration and relationships between these bodily systems
11. Be able discuss current relevant topics concerning genetics and genomics
12. Clinically apply an understanding of human physiology to realistic scenarios, case problems, and/or pathologic illnesses altering normal physiology.

## Tentative Lecture Schedule for Human Physiology

| | SUBJECT | CHAPTER |
|---|---|---|
| | Endocrine System | 13 |
| | Blood | 14 |
| **February 4** | | **EXAM I** |
| | Cardiovascular System | 15 |
| | Respiratory System | 19 |
| | Lymphatic System and Immunity | 16 |
| **March 11** | | **EXAM II** |
| | Digestive System | 17 |
| | Nutrition and Metabolism | 18 |
| | Urinary System | 20 |
| | Water, Electrolyte, and Acid-Base Balance | 21 |
| **April 15** | | **EXAM III** |
| | Reproductive Systems | 22 |
| | Pregnancy, Growth, and Development | 23 |
| | Genetics and Genomics | 24 |
| **Finals Week (May 3 - 6)** | | **Comprehensive Final** |

**Last day to withdraw from the course – April 30th**

**Disclaimer**: The information contained in this syllabus is as accurate as possible, but may be subject to change with reasonable advance notice. The schedule and content of lectures and assignments may be changed at the discretion of the instructor upon oral notification in class. Changes may involve additions, deletions, substitutions, or changes in sequence or due date.

**COURSE CONDUCT:** Classroom presentation is basically of the lecture-demonstration type. Lecture will be over the pre-assigned chapters with PowerPoints delivered as a visual aid. This will be supplemented with various scientific models, representative specimens, supplemental handouts, and special projects. Students should take notes and are expected to study beyond the lab and classroom and manage their time to develop good study habits for this course.

**UARM CREDIT HOUR CALCULATOR:** For every course credit hour, you should expect to spend at least three clock hours per week of concentrated attention on course-related work, including but not limited to time attending class, as well as out-of-class time spent reading, reviewing, organizing notes, preparing for upcoming quizzes/exams, problem solving, developing and completing homework, and other activities that enhance learning. For a three hour course, a typical student should expect to spend at least nine hours per week dedicated to the course. This includes the time spent in class.

**COURSE REQUIREMENTS:** Students are required to ***READ*** the material in the textbook and ***take notes*** over the lectures. It is advisable to read at least 5 pages in the assigned chapter daily). If you wait until the day before the test to read the chapter, study the notes, and learn the vocabulary, you will not do well on the exams.

**COURSE EVALUATION:** Student performance in the course will be based on the following factors:

| | | |
|---|---|---|
| Lecture Exams: | 3 @ 100 points each | = 300 points * |
| LearnSMART: | 12 @ 5 points each | = 60 points ** |
| Quizzes: | 5-10 @ 10 points each | = 50-100 points |
| Comprehensive Exam | 1 @ 200 points | = 200 points |
| **TOTAL POINTS POSSIBLE** | | **= 600 – 660 points **** |

**GRADING SCALE:**

A = 100 - 90%
B = 89 - 80%
C = 79 - 70%
D = 69 - 60%
F = 59% or lower

**EXAMS:** Exam dates are given in the syllabus and students are required to take all the tests offered including the Comprehensive final. Exam questions will be taken from lecture notes, exercises, discussion, audiovisuals, handouts, textbook information and other assignments. Many exam questions will require use of this material and critical thinking to conclude the answer. Exams may include all or any combination of the following types of questions: multiple choice, true/false, short-answers, fill-in-the blank, draw and label, matching, and short answer.

**Comprehensive Final** - 100 multiple choice questions taken from the semester material.

1. **Everyone must take the comprehensive final.**

* 2. If an exam is missed, potential credit may be carried over to the next exam IF GIVEN PERMISSION FROM THE INSTRUCTOR BASED ON REASONING FOR THE MISSED EXAM. (Example- if exam #2 is missed with an excused absence, exam 3 will be worth 200 points)

**LEARNSMART –** These learning assignments are administered through the CONNECT site and assigned as we start each chapter. These are graded based on completion of the assignment on time, with 5 possible points per assignment. **** Your Opportunity for Bonus Points**

**LECTURE/LAB QUIZZES** – Approximately 5-10 quizzes will be given throughout the semester during lecture periods. The quizzes will consist of questions related to lecture exercises performed, assigned readings, and related lecture information.

**ATTENDANCE REQUIREMENTS:** As a student, you are responsible for all material presented during lecture, whether present for the class or not. Assignments are to be completed in a timely fashion; therefore all make-up work must be completed within 3 calendar days of your return following an absence. Unexcused absences are not to exceed twice what the class meets in a week. Laboratory is a required part of this course and failure to attend or participate **will** result in an "F" for this course. For further information, see "Student Attendance" on page 70 of the 2017/2018 UARM Academic Catalog.

> **Make-up Policy:** A student who misses an assignment because of an officially sanctioned college activity or those with a documented excuse for their absence, will be permitted to make up the assignment or test without penalty. Any deviation from this policy will be considered on a case-by-case basis.

**Academic Dishonesty:** Instances of academic dishonesty, *i.e., "cheating,"* will be dealt with in accordance with those policies outlined in the current UARM Student Handbook.

**Cellphone usage policy:** Use of personal cell phones in class is prohibited **unless it is an emergency.** Failure to abide by policy results in a *verbal warning* upon first offense, and *10 point deduction* in grade with each additional offense after a verbal warning has been given. **Please make sure that your cell phone and any other electronic devices are turned off (or to silent mode) during the class session**.

**Additional Information:** Food and drinks are not permitted in this class.

**Disability Policy:** It is the policy of UARM to accommodate students with disabilities, pursuant to state and federal law. Any student with a disability who needs accommodations should contact the Vice President for Student Affairs Office, 394-7622 ext.1400.

**Arkansas Clean Air Act:** In compliance with the Arkansas Clean Air Act, UARM is a smoke and tobacco free facility. Students and guests are to refrain from the use of all tobacco products while on campus.

**Student Misconduct:** Students committing misconduct are subject to disciplinary sanction(s) and or restrictions. Misconduct or prohibited behavior includes, but is not limited to endangerment,

harassment, disruption, sexual misconduct, dishonesty, illegal drugs and/or alcohol, fire or safety issues, gambling, property violations, computer violations or other violations as listed in detail in the UARM catalog.

**UARM Mission:** The University of Arkansas Rich Mountain provides transformative education to all learners

**Campus Security:** UA Rich Mountain strives to provide a safe learning environment; therefore, students who know of any security risk are asked to contact a college official. For more information follow this link and look under the title Health and Safety: http://www.uarichmountain.edu/at-a-glance/disclosures