BIOL2211-02
Human Physiology Lab
Spring 2024

LABORATORY: Tuesday 6:00pm – 8:00pm.

LOCATION: Spencer Laboratory 229

INSTRUCTORS: Jo Lee Erickson, OTR/L & Fran Nault

OFFICE: Instructors may be available immediately prior to and following class, please do not interrupt another class, using your best judgement.

	On Campus Class Schedule	Location
Tuesday:	8:00am – 9:15am	Spencer LH 247
	4:30pm – 5:45pm	Spencer LH 247
	6:00pm – 8:00pm	Spencer Lab 229
Thursday:	4:30pm – 5:45 pm	Spencer LH 247
Friday:	8:00am – 9:15am	Spencer LH 247
	9:30am – 11:30am	Spencer Lab 229

OFFICE HOURS: Available as needed via email or pre-arranged on campus meeting. Please allow time for a reply, and do not expect a reply outside of normal business hours.

EMAIL: jerickson@uarichmountain.edu

PREREQUISITES: Prerequisites for this course are successful completion of the Human Anatomy course or instructor permission. **COREQUISITES**: Enrollment in Human Physiology BIO-2213 is also required.

RESOURCES: Laboratory Manual: Laboratory Manual for Hole's Human Anatomy and Physiology 16th (Cat and Fetal Pig version); Martin. ISBN: 1264262868

Optional**- Netter's Anatomy Coloring Book Updated Edition (Netter Basic Science) 2nd Edition ISBN-10: 0323545033

Course CONNECT: https://connect.mheducation.com/class/j-erickson-spring-2024

COURSE DESCRIPTION: The lab course will use a "hands on" approach, with an emphasis on integrated structure-function relationships at the tissue, organ, organ system, and organismal level. The laboratory materials will include a microscope slide library of human/animal tissues, animal tissue for dissection, palpation, auscultation, drawings, skeletons, clinical tests, models, and video film clips of human cadaver dissections. This course provides the foundation for the lab/clinical topics covered by requiring identification using anatomical nomenclature, proper laboratory/microscopy techniques, and problem-solving skills for the following systems: endocrine, cardiovascular, lymphatic, immune, digestive, respiratory, urinary, reproductive systems, including fluid and electrolyte balance; and acid-base balance. Lecture is an integral co-

requisite for this course and participation is required for successful completion of this course. This course is a co-requisite for Human Physiology lecture

PROGRAM OUTCOME AND RATIONALE: Students will increase their understanding of basic principles and their application in the field of biological sciences. 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 organization 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. Be able to effectively utilize anatomic terminology including use of appropriate relative anatomical terms as it relates to regions, directions, body planes, and cavities of the body.
2. Understand specific examples of homeostasis and how it is controlled in the human body.
3. Understand basic physiology and pertinent anatomy for the following human body systems: skeletal, integumentary, muscular, and nervous.
4. Be able to use microscopes, lab equipment, and computer technology to research information on human physiology.
5. Competently use clinical and laboratory equipment such as a stethoscopes, pulse oximeter, incentive spirometer, and sphygmomanometer.
6. Proficiently take vital signs and apply your knowledge of human physiology using applicable clinical tests/skills demonstrated
7. Analyze and interpret the basics of EKG/ECG strips and understand information related to physiological pathologies
8. Clinically apply an understanding of human physiology to realistic scenarios, case problems, and/or pathologic illnesses altering normal physiology.
9. Attain a basic understanding of the structures and relationships of the human body, and be able to use this information in a medical career or other biological discipline.

TENTATIVE LAB SCHEDULE

Date	Topic	Exercise
Jan 23	Endocrine System	(handout provided)
Jan 30	Blood Cells and Blood Typing	37
Feb 6	Heart Structure (dissection)	38
	Cardiac Cycle	39
Feb13	EKG/ECG analysis	(handout provided)

	Auscultation of cardiovascular system	
Feb 20	Vital signs	(handout provided)
	Clinical assessment: palpation, tests, and measures	
Feb 27	Respiratory Organs	45
	Breathing and Respiratory Volumes and Capacities	46
Mar 5	Respiratory ventilation	(handout provided)
	Spirometry	
	Auscultation of pulmonary system	
Mar 12	Lymphatic & Immune System	(handout provided)
Mar 19	**SPRING BREAK	
Mar 26	Lab Practical EXAM	37-42 + Prior Lab Handout activities.
Apr 2	Digestive Organs	43
April 9	Urinary Organs	48
	Urinalysis	49
April 16	Lab Practical EXAM	43-49
April 23	Fetal pig Dissection	60-65
	Cardiovascular, Respiratory, and Urinary	
April 30	Group(s) 1-4 clinical case presentation	
May 7	Group(s) 5-8 clinical case presentation	

May 3rd is the last day to withdraw.

LABORATORY CONDUCT: To prevent the spread of pathogens, a clean technique will be used while handling all models/specimens/palpations in the lab. The laboratory consists of a series of hands-on exercises that are designed to reinforce some of the principles learned in class. Lab exercises are assigned beforehand and it is expected that you read the material BEFORE coming to class. You are expected to study and review models, materials, and organisms provided in lab as well as the A&P Revealed application in CONNECT. Inappropriate comments and/or behavior during labs will not be tolerated!

NOTE: IN THE EVENT OF CLASS/CAMPUS TRANSITION TO ONLINE STUDY, ALL LABORATORY ASSIGNMENTS AND EXAMS WILL BE ONLINE THROUGH BLACKBOARD AND/OR CONNECT

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 laboratory manual and take notes over the lectured information and handouts. 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 practical exams

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

Quizzes: 5-10 @ 10 points each = 50-100 points
Dissections 2 @ 50 points each = 100 points
Clinical case presentation 1@ 100 points = 100 points
Lab Practical Exams 2 @ 50 points = 100 points
TOTAL POINTS POSSIBLE = 400-450 points **

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

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

CLINICAL CASE PRESENTATIONS – Laboratory groups of (3-4 people) from each table will receive a clinical case with a medical diagnosis relevant to systems discussed in Human Physiology (ex. Grave's disease, Diabetes, Heart Failure, COPD, chronic kidney disease, etc). Each group will answer questions given with their respective case and present these findings during lab using a PowerPoint presentation. Following each presentation, a discussion panel will occur with questions asked by peers and the instructor. Grading will be based on overall presentation and participation. A separate rubric will be given along with each clinical case.

LAB PRACTICAL EXAM – Laboratory Practical's are in-class examinations, in which students are given equipment, materials, and samples from previous laboratory exercises and asked to individually answer questions about them.

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. 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" in the 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.

ATTENDANCE POLICY: For attendance purposes, a student who is displaying symptoms of illness must email: contact.tracing@uarichmountain.edu to determine next steps for an excused absence related to COVID or flu. Contacting an instructor DOES NOT start this process or guarantee an excused absence.

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 instructor's discretion, upon oral class notification. Changes may involve additions, deletions, substitutions, or changes in sequence or due date.

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. Any student suspected of cheating will be asked to complete an alternate proctored exam.
It is expected that each student shall do their own work on assignments and exams. Academic dishonesty in any form will result in a zero (0) grade for that work. The policy on academic dishonesty can be found in the UARM Handbook.
Cheating: includes, but is not limited to:

- Copying from another student's test paper.
- Using any unauthorized assistance in taking quizzes, tests, or examinations.
- Possession during a test of materials that are not authorized by the person giving the test, such as class notes or specifically designed "crib notes."
- Dependence upon the aid of sources beyond those authorized by the instruct inwriting papers, preparing reports, solving problems, or carrying out assignments.
- The acquisition, without permission, of tests or other academic material belonging to a member of the University of Arkansas Rich Mountain faculty or staff.
- Plagiarism: offering the work of another as one's own without proper acknowledgement.
- Aiding and abetting another person in committing any form of academic dishonesty.
- Making, possessing, or using any falsified college documents or records; altering any college document or record, including identification cards.

- Knowingly providing false information to college officials, including disciplinary hearing bodies.
- Falsely claiming to represent the college or a registered student organization of the college.

Academic dishonesty is an academic offense and a behavioral violation. The Vice President of Academic Affairs provides information on the academic due process in instances of academic dishonesty. The student may also face the behavioral process as well.

The use of **ChatGPT** or any other Artificial Intelligence (AI) program to generate your work in any manner is prohibited in this class and constitutes academic dishonesty. This action with be subject to the penalties of the academic dishonesty policy.

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.

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

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.

TITLE IX AND DISCRIMINATION POLICY: UA Rich Mountain adheres to a policy that enables all individuals regardless of race, color, gender, national origin, age, religion, sexual orientation, veteran's status, or disability, to work and study in an environment unfettered by discriminatory behavior or acts. Harassment of an individual or group will not be condoned, and any person (student, faculty, of staff member) who violates this policy will be subject to disciplinary action.

Harassment that is considered discriminatory includes actions or conduct (verbal, graphic, gestural, or written) directed against any person or group with the intent to demean or create a hostile or threatening environment. It is not the intent of this policy to infringe upon or limit educational, scholarly, or artistic expression. Any person who believes he or she has been discriminated against should contact the Title IX Coordinator to obtain assistance and information concerning the filing of a complaint.

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: 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