Anatomy and Physiology II: BIO 144-01
Spring 2020

Lecture: TR 4:30 - 5:45pm in Lecture Hall 247; **Lab**: T 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 Anatomy and Physiology I course or Instructor Permission.

RESOURCES:
Lecture Text *Hole's Human Anatomy and Physiology* 14th ed; Shier, Butler, Lewis.
Laboratory Manual: *Laboratory Manual for Hole's Human Anatomy and Physiology* 14th (Cat Version); Martin. Package ISBN: 978 125 9681240
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-20192020

Course Description: Human Anatomy and Physiology II is a continuation of a two semester 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 structure and function of the remaining organ systems: endocrine, cardiovascular, lymphatic, digestive, respiratory, and urinary, and reproductive systems, including fluid and electrolyte balance; and acid-base balance. Laboratory is an integral part of this course and participation is required for successful completion of this course.

PROGRAM OUTCOME and Rationale: The purpose of the Associate of Arts Program is to provide students with the knowledge and critical thinking skills that will enable students to analyze problems, arrive at intelligent conclusions, and make reasoned choices in their professional and personal lives.

- Students will demonstrate an understanding of physical and biological principles.
- Students will apply technological and research skills to identify, locate, and process information.
- Students will demonstrate competency in writing, reading, speaking, and listening.
- Students will be able to compete academically upon transfer to a four year institution.

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 to metabolism.
3. Differentiate the types of tissues and their significance to the human body.
4. Discuss the role of DNA as it pertains to the organismal level with regards to replication and protein synthesis.
5. Describe the anatomy and physiology of the endocrine system and typical pathologies/medical diagnoses associated with dysfunction of any of the parts of this system.
6. Describe the anatomy and physiology of the cardiovascular system(s) and typical pathologies/medical diagnoses associated with dysfunction of any of the parts of this system.
7. Describe the anatomy and physiology of the pulmonary/respiratory system and typical pathologies/medical diagnoses associated with dysfunction of any of the parts of this system.
8. Describe the anatomy of the lymphatic system and how it fulfills its functions.
9. Describe the anatomy of the digestive system and how it fulfills its functions.

10. Describe the anatomy of the urinary system and how it fulfills its functions.
11. Describe the anatomy of the reproductive system and how it fulfills its functions.
12. Discuss homeostasis and how it is controlled in the human body.
13. Competently use microscopes and computer technology to observe human tissues and organs.

Tentative Lecture Schedule for Human Anatomy and Physiology II

	SUBJECT	CHAPTER
	Endocrine System	13
	Blood	14
February 6		**EXAM I**
	Cardiovascular System	15
	Respiratory System	19
	Lymphatic System and Immunity	16
March 12		**EXAM II**
	Digestive System	17
	Nutrition and Metabolism	18
	Urinary System	20
	Water, Electrolyte, and Acid-Base Balance	21
April 16		**EXAM III**
	Reproductive Systems	22
	Pregnancy, Growth, and Development	23
	Genetics and Genomics	24
Finals Week (May 4 - 7)	**Comprehensive Final**	

Last day to Withdraw from the Course – May 1st

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.

TENTATIVE LAB SCHEDULE

Date	Topic	Exercise
Jan. 21	Endocrine Histology and Diabetic Physiology	36
	Blood Cells and Blood Typing	37
Jan. 28	Heart Structure	38
	Cardiac Cycle	39
	Auscultation of cardiovascular system	
Feb. 4	Heart Structure	38
	Cardiac Cycle	39
	Auscultation of cardiovascular system	
Feb. 11	Blood Vessel Structure, Arteries, and Veins	40
	Pulse Rate and Blood Pressure	41
	Clinical assessment: palpation, tests, and measures	
Feb. 18	Respiratory Organs	45
	Breathing and Respiratory Volumes and Capacities	46
	Control of Breathing	47
	Spirometry, and auscultation of pulmonary system	
Feb. 25	Lab Practical EXAM	36-47
March 3	Lymphatic System	42
March 10	Digestive Organs	43
	Action of a Digestive Enzyme	44
March 17	Urinary Organs	48
	Urinalysis	49
March 24	**Spring Break	
March 31	Lab Practical EXAM	42-49
April 7	Group(s) 1-4 clinical case presentation	
April 14	Group(s) 5-8 clinical case presentation	
April 21	Group(s) 9-12 clinical case presentation	
April 28	Cat Dissection:	55, 56, 57, 58, 59
	Cardiovascular, Respiratory, Urinary, and Reproductive	

COURSE CONDUCT: Classroom presentation is 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 are STUDY** beyond the lab and classroom, and manage their time to develop good study habits for this course.

LABORATORY CONDUCT: The laboratory consists of a series of hands-on exercises that are designed to reinforce some of the principles we will learn 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.

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. Students may download the notes (power point) before class. 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 are doomed to failure.

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

Lecture Exams:	3 @ 100 points	= 300 points
LearnSMART:	10 @ 10 points	= 100 points **
Quizzes:	7-10 @ 20 points	= 140-200 points
Cat Dissection(s)	1 @ 100 points	= 100 points
Lab Practical Exams	2 @ 50 points	= 100 points
Clinical Case Presentation	1@ 100 points	= 100 points
Comprehensive Final	1 @ 200 points	= 200 points*
TOTAL POINTS POSSIBLE		**= 1040-1100 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, laboratory exercises, discussion, audiovisuals, handouts, textbook 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. It will not be dropped.**

* 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 quizzes are administered through the CONNECT site and assigned as we start each chapter. These are graded according to the percent of the assignment completed on time, with **10** possible points per assignment. **** Your Opportunity for Bonus Points**

QUIZZES – Approximately 7-10 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. These quizzes will be administered either in person at the beginning or end of lab, or online through the Course CONNECT.

LAB PRACTICAL EXAM – Exam, in which students are given models, materials, and samples from previous laboratory exercises and asked to individually answer questions about them, or demonstrate clinical skill/tests performed during laboratory assignments.

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 A&P II (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.**

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 5 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 will be permitted to make up the assignment or test without penalty. Others may also make up missed exams, but will be penalized 20% for each occurrence. 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.

Additional Information: Food and drinks are not permitted in this class. **Please make sure that your cell phone and any other electronic devices are turned off (or to silent mode) during the class session**.

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 exists to provide all residents of the Ouachita Mountain Region with exemplary educational and enrichment opportunities to improve the quality of life and standard of living.

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

Credit Hour Requirement Calculator

Course Information

Department, Course Number		Biological Science	BIO144
Course Title	Anatomy and Physiology II		
Credit Hours	4		
Mode of Delivery	Traditional		Lecture/Lab
Weeks in Part of Term	15		
Level of Reading Material	Advanced/Scientific/Technical (2)		2
Reading Level of Students	Average Student (2)		2
Average Pages per Hour	11		

Enter either week or term, not both

Contact Hours	**Hours/Week**	**Hours/Term**	**Total Hours**
Lecture/Recitation	3		45
Lab Contact Hours	2		30

	Pages Asg'd	**Hours/Week**	**Hours/Term**

Syllabus Items			
Reading Lecture Material	450	40.9	40.9
Learnsmart Quizzes Online		12	12
Reading Lab Assignment	200	18.2	18.2
Quizzes for Lab		7.5	7.5
Reviewing lab material for practicals		6	6
Reviewing lecture material for exams		8	8
			0
			0
Total Hours			167.6
Required Hours			150
Difference			Ok + 17.6