

BIOL 2402
Anatomy & Physiology II

Western Texas College

- I. Basic Course Information
 - A. Lecture-- Anatomy and Physiology II is the second part of a two-course sequence. It is a study of the structure and function of the human body including the following systems: endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including nutrition), urinary (including fluid and electrolyte balance), and reproductive (including human development and genetics). Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis.
 - B. Lab--The required lab provides a hands-on learning experience for exploration of human system components and basic physiology. Systems to be studied include endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including nutrition), urinary (including fluid and electrolyte balance), and reproductive (including human development and genetics).
 - C. Any required prerequisites: None
 - D. Required grade for enrolling in the next course in this sequence: None
- II. Student Learning Outcomes
 - A. Lecture
 - 1. Use anatomical terminology to identify and describe locations of major organs of each system covered.
 - 2. Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.
 - 3. Describe the interdependency and interactions of the systems.
 - 4. Explain contributions of organs and systems to the maintenance of homeostasis.
 - 5. Identify causes and effects of homeostatic imbalances.
 - 6. Describe modern technology and tools used to study anatomy and physiology.
 - B. Lab
 - 1. Apply appropriate safety and ethical standards.
 - 2. Locate and identify anatomical structures.
 - 3. Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations.
 - 4. Work collaboratively to perform experiments.
 - 5. Demonstrate the steps involved in the scientific method.
 - 6. Communicate results of scientific investigations, analyze data and formulate conclusions.
 - 7. Use critical thinking and scientific problem-solving skills, including, but not limited to, inferring, integrating, synthesizing, and

summarizing, to make decisions, recommendations, and predictions.

III. Testing Requirements

- A. The Chapter Test and Final exam must be proctored by an approved testing organization. (Ask you instructor for more details.)
- B. Students are NOT allowed to use their book or notes of any kind while taken their proctored tests and exam.
- C. All Chapter Tests and the comprehensive Lab and Lecture Final Exams are timed.

IV. Course Requirements

- A. Campus/Online
 - 1. 8 multiple-choice chapter quizzes
 - 2. 4 current science article write-ups and associated class discussion
 - 3. 8 Lab Assignments
 - 4. 3 non-cumulative multiple-choice chapter exams
 - 5. 1 cumulative multiple-choice final exam

V. Information on Books and Other Course Materials

- . *Human Anatomy & Physiology* by Marieb and Hoehn (10th edition)
ISBN - 978-0-321-92704-0
- A. Lab Materials
 - 1. Campus - *Human Anatomy & Physiology Laboratory Manual, Fetal Pig Version 12th edition* by Marieb & Mitchell ISBN-9780133893380
 - 2. Online – Hands-on-Labs Kit SP-3002-AP-01

VI. Grading Breakdown:

. Campus/Online	
Articles.....	15
%	
Quizzes.....	1
0%	
Lab	
Assignments.....	15%
Lab	
Final.....	10%
Chapter	
Tests.....	25%
Final	
Exam.....	25%

VII. Other Policies, Procedures and important dates. Please refer to the WTC [Catalog](#) for the following

- . Campus Calendar
- A. Final exam schedule
- B. How to drop a class
- C. Withdrawal information
- D. Student Conduct/Academic Integrity
- E. Students with disabilities

VIII. Course Content

Lecture		Laboratory Activities
Chapters Covered	Sections Covered	
16 – The Endocrine System	Endocrine system function, hormone structure and function, major glands of the body	Cardiovascular System; Heart and Blood Vessels
17 – Blood	Function of blood, components of blood	Anatomy of the respiratory System
18 – The Cardiovascular System: The Heart	Function and structure of the heart, control of cardiac output	Anatomy of the Digestive System
19 – The Cardiovascular System: Blood Vessels	Structure and function of blood vessels, control and function of blood circulation	The Urinary System
20 – The Lymphatic System and Lymphoid Organs and Tissues	Lymphatic structures and function, interaction of lymphatic and cardiovascular system	Anatomy of the Reproductive System
21 – The Immune System: Innate and Adaptive Body Defenses	Innate defenses, adaptive defenses, chemical explanation of the immune system, vaccinations	
22 – The Respiratory System	Respiratory anatomy, physiology of respiration, interaction of respiratory and cardiovascular systems	
23 – The Digestive System	General digestive anatomy, function and structure of digestive organs, chemical basis of absorption, interaction of digestive and cardiovascular system	
24 – Nutrition, Metabolism, and Body Temperature Regulation	Chemical basis of human nutrition, function of vitamins and minerals,	

	metabolism, metabolic function of body organs	
25 – The Urinary System	Kidney function and structure, urine formation, chemical importance of the urinary system	
27 – The Reproductive System	Anatomy and physiology of the male reproductive system, anatomy and physiology of the female reproductive system, sexually transmitted infections	
28 – Pregnancy and Human Development	Steps of human pregnancy, maternal changes during pregnancy, fetal development	
29 – Heredity	Heredity, types of human inheritance, genetic abnormalities	

Last Modified: August 25, 2017