

Anatomy & Physiology II (BIOL 2302)



Credit: 3 semester credit hours (3 hours lecture)

Prerequisite: BIOL 2301

Co-requisite: Passed the Reading/Writing Sections of COMPASS or any other accepted test and BIOL 2102.

Course Description

Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content may be either integrated or specialized.

Required Textbook and Materials

1. *Anatomy & Physiology* by E. Marieb, 3rd edition. **ISBN-13:** 978-0321559609
2. Five #882 scantrons and regular (non-mechanical) #2 pencils.
3. Calendar for recording assignment due dates, tests, projects, etc.
4. Notebook with pocket (three ring for binding class notes)
5. 3-hole punch
6. Pens, colored pencils and/or highlighters of various colors
7. Materials necessary to create a visual aid for a group project/ presentation such as a USB (Flash) drive
8. Computer internet access to class website: <http://slanoue.createdby.us>

Course Objectives

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

1. Define the terms related to blood and list the functions of blood. Describe the circulation of blood through the circulatory system. (SCANS: F1.3, F2.3, F4.3, F6.3, F7.3, F8.3, F9.3, F11.3)
2. List and describe the parts of the heart. (SCANS: F1.3, F2.3, F4.3, F6.3, F7.3, F8.3, F9.3, F11.3)
3. List and describe the major blood vessels. (SCANS: F1.3, F2.3, F4.3, F6.3, F7.3, F8.3, F9.3, F11.3)
4. List and describe the function of the immune system. List the major organs in the immune system. (SCANS: F1.3, F2.3, F4.3, F6.3, F7.3, F8.3, F9.3, F11.3)
5. Describe the functions of the respiratory system. List major organs involved in respiration. (SCANS: F1.3, F2.3, F4.3, F6.3, F7.3, F8.3, F9.3, F11.3)

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6. Describe the functions of the digestive system. (SCANS: F1.3, F2.3, F4.3, F6.3, F7.3, F8.3, F9.3, F11.3)
7. List organs and accessory organs involved in digestion. (SCANS: F1.3, F2.3, F4.3, F6.3, F7.3, F8.3, F9.3, F11.3)
8. Describe nutrition, metabolism and body temperature regulation and describe the importance in maintain a healthy body. (SCANS: F1.3, F2.3, F4.3, F6.3, F7.3, F8.3, F9.3, F11.3)
9. Describe the function of the urinary system. List the organs of the urinary system. List the organs of the urinary system. (SCANS: F1.3, F2.3, F4.3, F6.3, F7.3, F8.3, F9.3, F11.3)
10. Describe fluid, electrolyte and acid-base balance. (SCANS: F1.3, F2.3, F4.3, F6.3, F7.3, F8.3, F9.3, F11.3)
11. Describe the functions of the reproductive system. List the organs of the male and female reproductive system. (SCANS: F1.3, F2.3, F4.3, F6.3, F7.3, F8.3, F9.3, F11.3)

SCANS Skills and Competencies

Beginning in the late 1980's, the U.S. Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS) conducted extensive research and interviews with business owners, union leaders, supervisors, and laborers in a wide variety of work settings to determine what knowledge workers needed in order to perform well on a job. In 1991 the Commission announced its findings in *What Work Requires in Schools*. In its research, the Commission determined that "workplace know-how" consists of two elements: foundation skills and workplace competencies.

Course Outline

- I. Endocrine System
 - A. Organs of the endocrine system
 - B. Functions of the endocrine organs
 - C. Hormones and target tissues
 - D. Endocrine disorders
- II. Blood
 - A. Red Blood Cells
 - B. White Blood Cells
 - C. Platelets and blood clotting
 - D. Blood Groups and compatibility
 - E. Diseases
- III. Heart
 - A. Structure and function
 - B. Blood flow through the heart
 - C. Electrical conduction system and ECG interpretation
- IV. Circulatory System
 - A. Types of blood vessels and characteristics
 - B. Anatomy of the major arteries (anterior and posterior)

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- C. Anatomy of the major veins (anterior and posterior)
- V. Lymphatic and Immune Systems
 - A. Organs of the lymphatic system
 - B. Functions of those organs
 - C. Immunity and disease
- VI. Respiratory System
 - A. Structural anatomy
 - B. Physiology
 - C. Diseases
- VII. Digestive System
 - A. Organs and structures
 - B. Functions of organs
 - C. Enzymes and the digestive process
 - D. Diseases
- VIII. Nutrition
 - A. Proper nutrition (problems with N. American diet)
 - B. Metabolism and Krebs's cycle
- IX. Urinary System
 - A. Structural anatomy
 - B. Electrolytes and Fluid Balance
 - 1. Fluid
 - 2. Electrolyte balance
- X. Reproductive System
 - A. Male anatomy
 - B. Female anatomy
 - C. Function
 - D. Meiosis

Grading Scale

- A 900 – 1000 points
- B 800 – 899 points
- C 700 – 799 points
- D 600 – 699 points
- F 599 points or less

Course Evaluation

The final grade is based upon grades earned on tests and the group research project and presentation.

1. Five major tests are given (200 points each)
2. One major test grade is dropped
3. All students must take the Final Exam. The Final Exam grade is eligible as a dropped grade.
4. Group Research Project With Presentation (200 points)

Course Requirements

1. Tests.
2. Reading Assignments.
3. Classroom Activities
4. Group Project.

Course Policies

1. **No Cell Phones.** Students that use their cell phones for any purpose during class time will have their phone confiscated. First offense is a verbal warning. The second offense is dismissal from class for the duration of the semester.
2. **Late assignments will not be accepted.** Students will receive a zero for assignments not completed.
3. **No makeup exams.**
4. **Discipline Policy.** In the case of disruptive behavior, the instructor reserves the right to ask you to leave the classroom. Examples include side conversations, excessive talking in class, passing written notes to another classmate, chatting on cell phones or text messaging, loud yawning, gum popping, etc.
 - a. The instructor may not allow you to return to class if disruptive behavior continues.
5. **Food and/or Drinks are not allowed in the classroom.** LIT Policy prohibits food and drinks in the Multi Purpose Building classrooms.
6. **Attendance Policy.** Roll will be taken daily. Your attendance is documented by signing your initial on the class roll every day. Do not initial/sign the roll for another student.
7. **Class Arrival Times**
 - a. **Tardy.** Please be prompt! Students are expected to be in your seat, on time, when roll is taken. On test days, the instructor reserves the right not to administer a test to a student who arrives more than 15 minutes late.
 - b. 4 tardies = 1 absence
 - c. **Class Departure Time.** Students are required to stay the entire length of each lecture class unless dismissed, as a class, by the instructor. Do not ask to “leave class early” for doctor’s appointments, picking up children from day care/ school, etc. Pre-arrange for these things ahead of time. Students are expected to be in class the entire class period.
 - d. **Class Absence.** It is the student’s responsibility to obtain missed lecture notes and class handouts. The instructor will not supply notes or handout to students that are absent. Xerox machines are available at the Mary and John Gray Library.
 - e. **Absence on a Test Day.** One test may be excused and/or dropped per semester (NO EXCEPTIONS!) **NO TEST MAKE-UPS!** Documentation in support of your absence is required.

Disabilities Statement

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office located in the Cecil Beeson Building, room 116B.

Course Schedule (Tentative)

Week of	Topic	Reference
Jan 11 - 15	Go over syllabus; start Ch 15	Class website
Jan 18 - 22	1/18/10 (Holiday); Ch 15	Class website
Jan 25 - 29	Finish Ch 15; Start Ch 16	Class website
Feb 1 - 5	Finish Ch 16; Test 1	Class website
Feb 8 - 12	Ch 17	Class website
Feb 15 - 19	Ch 18	Class website
Feb 22 - 26	Ch 19	Class website
March 1 - 5	Test 2; Start Ch 21	Class website
March 8 - 12	Spring Break (No Classes)	
March 15 - 19	Finish Ch 21; Start 22	Class website
March 22 - 26	Finish Ch 22; Start Ch 23	Class website
March 29 – April 2	Finish Ch 23 4/1 (Faculty All College Day/ Students No Classes); 4/2 (Holiday)	Class website
April 5 - 9	All Students – Group Presentations	n/a
April 12 - 16	Test 4; Start Ch 24	Class website
April 19 - 23	Finish Ch 24; Ch 25	Class website
April 26 - 30	Ch 26	Class website
May 3 – 5 (Last Class Day)	Finish Ch 26; Test 4	Class website
May 6 (Finals Begin)		
May 10 – 12 (Weds)	Final Exams	n/a

Contact Information

Varies by Instructor