



Anatomy and Physiology II | Lecture and Lab

Academic Year 2020-2021

Course Information

Course Numbers

BIO226/BIO226L

Total Credits

4 (3 Lecture + 1 Lab)

Time Requirement

75 hrs (Lecture 45hrs + Lab 30hrs)

Course Details

Recommended Prerequisites

High School Diploma or equivalent; General Education courses are highly recommended

Course Description

This course is the second in a two parts series covering gross and microscopic structure of human body and basic understanding of physiological mechanisms. The course provides thorough analyses of organization of human body including chemical, cellular and tissue levels of organization; covering support and movement of the body including the integumentary system, bones and skeletal tissue, the human skeleton, joints, muscle tissue and the muscular system; regulation and integration of the body including the endocrine system; and the systems required for body maintenance including digestive system and the principles of nutrition, metabolism, and energy balance. Laboratory includes work with microscope, human body models, and cadavers.

Lecture and Laboratory Communication

A website will be set up on Canvas by your instructor.

Log in with your Username and password: <https://scuhs.instructure.com>

Faculty Information

Refer to the Canvas course webpage for this information.

Class Meeting Times

Refer to Canvas course webpage for this information.

Instructional Materials

Required Text(s)

Anatomy and Physiology by Marieb & Hoehn, 6th edition (ISBN 13: 9780134156415) -OR- Anatomy and Physiology: An Integrative Approach by McKinley 3rd edition (ISBN 13: 978-1259398629)

Lab

Laboratory Manual for Anatomy & Physiology (available on Canvas)

Lab Materials Provided: Safety Goggles; Latex gloves and disposable lab coats

Required Attire

Close-toed shoes, professional attire and lab coats are mandatory during all lab hours. Gloves, goggles and additional safety equipment will be required per experiment.



Course Purpose

Student Learning Outcomes

At the conclusion of this course, a successful student should be able to:

1. Develop a vocabulary of appropriate terminology to effectively communicate information related to anatomy and physiology.
2. Describe the fundamental structure and function of the nervous system and nervous tissue.
3. Understand the normal structure of the blood, cardiovascular, lymphatic, immune, respiratory, urinary, and the reproductive systems.
4. Understand the normal function of the blood, cardiovascular, lymphatic, immune, respiratory, urinary, and the reproductive systems.
5. Recognize the correlation between anatomy and physiology of the above systems.
6. Synthesize ideas to make a connection between knowledge of anatomy and physiology and real-world situations, including healthy lifestyle decisions and homeostatic imbalances.

Course Schedule

(subject to slight modifications by the instructor)

Reading Chapters refer to the Marieb and Hoehn textbook.

Day	Lecture	Reading	Assessment
1	Introduction Fundamentals of the Nervous System and Nervous Tissue The Central Nervous System	Chapter 11 Chapter 12	Class Participation
2	The Peripheral Nervous System & Reflex Activity The Autonomic Nervous System	Chapter 13 Chapter 14	Class participation
3	Blood	Chapter 16	Quiz 1
4	The Cardiovascular System (Heart) The Cardiovascular System (Blood Vessels)	Chapter 17 Chapter 18	Class participation
5	The Lymphatic System The Immune System	Chapter 19 Chapter 20	Midterm Test
6	The Anatomy of the Respiratory System The Physiology of the Respiratory System	Chapter 21	Class participation
7	The Urinary System Fluids and Electrolytes	Chapter 24 Chapter 25	Quiz 2
8	The Female Reproductive System The Male Reproductive System	Chapter 26	Class participation
9	Review		Class participation
10	Final Test		Final Test

Tentative Grading Procedures

Lecture Assessment	Weight (%)
Class participation/activities	10
Quiz 1	20
Midterm	25
Quiz 2	20
Final Test	25
Total	100

Lab Schedule

(subject to slight modifications by the instructor)

Day	Laboratory	Assessment
1	Study of nervous system anatomy (cranial nerves and spinal tracts) using models and cadavers	Lab assignments
2	Physiology of human reflexes and special senses and cranial nerves	Lab assignments
3	Identification of blood components; ABO Blood Typing; case Study	Lab assignments
4	Anatomy of the cardiovascular system using models and cadavers Histology study of cardiac muscle tissue and vessel wall (Mammalian Heart Dissection)	Lab assignments
5	Cardiovascular System: heart sounds, pulse, blood pressure and the various factors that affect them (ECG)	Lab Assignments
6	Immune/Lymphatic System: identification of organs, Microscopic anatomy of lymph nodes, spleen, tonsil and thymus; discussion of the immune response	Midterm Lab assignments
7	Anatomy of the Respiratory System: study of anatomy using models and cadavers; spirometry Physiology of the Respiratory System: factors influencing the rate and depth of respiration	Lab assignments
8	Renal System: Study of anatomy using models and cadavers; Urinalysis; Case study	Lab assignments
9	Reproductive System: Study of anatomy using models and cadavers	Lab assignments
10	Final Tests	Final Test Cadaver Lab Test

Tentative Grading Procedures (Lab)

Assessment	Weight (%)
Lab Quizzes	30
Lab Tests	50
Cadaver Lab Test	10
Lab Assignments	10
Total	100%



Grading scale:

Please note letter grades will be assigned only at the end of the trimester.

A = 90% to 100%

B = 80% - less than 90%

C = 70% - less than 80%

D = 60% - less than 70%

F = less than 60%

W = Withdrawal

Grading procedures:

The format of assessments may include multiple choice, short answer, labelling, fill-in-the-blank, or matching examinations. Participation points are required and will be assigned by the instructor as the course progresses using any of the following: in class mini quizzes, activities, online quizzes. For online quizzes students must have a phone, tablet, laptop or other internet connected device to participate. Students must be in class during the participation activities to receive participation marks.

Academic Integrity

Visit SCU's [Academic Integrity](#) page to review policies for professionalism and academic integrity.

Teaching Methods and Activities

The course requires a significant time commitment from students. This commitment is both in terms of reading before lectures, as well as reviewing the material and doing problems after the lectures. In the five weeks of classes, we will cover the fifteen chapters of the book. Not every topic will be covered in great depth, but students are expected to study each topic in greater detail through completing the homework and the labs.

Required Attire

Close-toed shoes, professional attire and lab coats are mandatory during all lab hours. No shorts, heels, or flip-flops will be allowed in the laboratory; hair longer than shoulder-length must be pulled back and held with a clip or hair tie. Gloves, goggles and additional safety equipment will be required per experiment.

Classroom Expectations

Please be professional, prompt, prepared, and polite always.

The professor will adhere to all policies as found in the Student Handbook. Cellular phones must be kept on silent during class and lab times. Students may not use a phone as a calculator. As a safety precaution, no food or drinks are allowed inside the lab, but there will be a designated break for eating and drinking outside of the lab.



Best Practices for Studying

- Read before and read after each class. Skim the chapter before it is covered in lecture in order to become comfortable with some of the terms associated with each topic. Review each chapter after it is covered in class to enhance your understanding of what was covered in class.
- Participate during class by taking notes during class and looking over them afterwards. Don't skip class, arrive late, or leave early. Ask questions for clarification when you don't understand the material.
- Stay on top of the homework and assignments. Do the assigned problems as close to the time as when the topic is covered in the class to increase the depth of your understanding of specific concepts and will help you learn the material more efficiently and effectively.
- Do not wait until the night before the homework is due to start the assignment. You will get more out of it if you take the time to really learn the concepts and review the material without being rushed.
- Find a group of students to study with. Seek out students dedicated to doing well in the course. This makes studying more fun and helps you learn the material better by teaching what you know and learning from your peers what you don't know. Explaining these concepts to others will help you learn the material even better.
- Stay focused by finding an environment where you can study with few distractions.

Classroom Expectations

- Please be professional, prompt, prepared, and polite always.
- All policies found in the Student Handbook and SCU policy guide will be adhered to.
- Cellular phones must be kept on silent during class and lab times.
- Students may not use a phone as a calculator.
- As a safety precaution, no food or drinks are allowed inside the lab, but there will be a designated break for eating and drinking outside of the lab.
- Be prepared to spend about 20 hours a week outside of school studying and completing homework assignments.
- It is important to read about each lecture's chapter before coming to class
- It would be a good idea to form study groups.

University Policies

Accommodations

As a learning-centered community, Southern California University of Health Sciences recognizes that all students should be afforded the opportunity to achieve their academic and individual potential. The University recognizes and supports the standards set forth in Section 504 of the Rehabilitation Act and

the American with Disabilities Act (ADA). In accordance with its mission and federal and applicable state laws, the University is committed to making reasonable accommodations for qualified applicants for admission and enrolled students with disabilities. A student who needs accommodation(s) due to a disability should contact the Academic Support Office located in the Learning Resource Center.



Faculty and Dr./Patient Relationships

SCU faculty are highly skilled. However, per University Policy, health care is offered to students through the University Health System only. Neither preclinical nor clinical faculty can provide advice, assessment, treatment, or other elements that would be considered part of a Doctor-Patient relationship outside of a clinical setting established for that purpose.

Learning Activities

Students are expected to spend at least two hours for each lecture hour of course time per week in activities and assessments outside the classroom. Examples of activities include but are not limited to writing papers; reading articles or text; small group work; presentations; completing assignments; preparation for assessments; online activities and other activities that do not include direct instructor interaction and involvement.

All university policies apply to this course and all others. For full policy information please consult the university SCU Policy Manual. For a quick reference guide to the following policies: make-up examination, F-challenge examination, grade posting, results of failing grades, student support information, syllabus amendments, special needs, student conduct, and attendance, please consult the academic policies document housed on the [Online Student Services](#) .