



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-part 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: 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)

| Week | Lecture | Assessment |
|------|---|-------------------------|
| 1 | Module 1: Nervous Tissue | Reading Assignments |
| | Module 2: Brain and Cranial Nerves | Quizzes |
| | Module 3: Spinal Cord and Spinal Nerves | Module Exams |
| 2 | Module 4: Autonomic Nervous System | Reading Assignments |
| | Module 5: Senses | Quizzes |
| | Module 6: Blood | Module Exams |
| 3 | Module 7: Heart | Reading Assignments |
| | Module 8: Vessels and Circulation | Quizzes |
| | Module 9: Lymphatic System | Module Exams |
| 4 | Module 10: The Immune System | Reading Assignments |
| | Module 11: Respiratory System | Quizzes |
| | Module 12: Urinary System | Module Exams |
| 5 | Module 13: Fluid and Electrolytes | Reading Assignments |
| | Module 14: Reproductive System | Quizzes Module Exams |

Tentative Grading Procedures

Lecture

| Assessment | Points per assignment | Total number of assignments |
|--------------------|-----------------------|-----------------------------|
| Reading Assignment | 25 | 14 (1 per module) |
| Quiz | 10 | 14 (1 per module) |
| Module Exam | 50 | 14 (1 per module) |

Lab Schedule

(subject to slight modifications by the instructor)

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

Tentative Grading Procedures

Lab

| Assessment | Weight (%) |
|-------------------|-------------|
| Lab Quizzes | 30 |
| Lab Tests | 30 |
| Cadaver Lab Tests | 30 |
| 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

Each week's material is divided into two or three modules, for a total of 14 modules. The course will follow a linear format, meaning you will complete all the modules in sequence. The material in each module will include a combination of readings, videos, and written and interactive assignments. You'll also complete an exam at the end of each module. You may engage in discussions with your peers throughout the course. You can read about each of the course components below. Each module takes about 5 hours to finish. The flow of the modules on Canvas should be followed.

The course requires a significant time commitment from students. This commitment is both in terms of reading lecture PowerPoints prior to reading the chapters, as well as reviewing the material and doing "Check Your Understanding" activities after. In the five weeks of classes, we will cover 14 chapters of the book. Not every topic will be covered in great depth, but students are expected to study each topic in detail.

Introduction: These sections introduce the content covered in each module and outline the learning objectives. Reading the Introduction will help you identify the central concepts of the module and connect what you will learn to the broader context of the course.



Lecture Outline: These sections contain the lecture slides for each chapter. They provide a comprehensive summary of the chapter. Reading the lecture slides prior to doing the reading assignments on Learning Smart will help you to formulate your thoughts and promote active learning.

Reading Assignment: These sections are created on “Connect” through SmartBook. They improve reading productivity and provide students with better knowledge retention. SmartBook is an intelligent eBook that applies the adaptive technology of LearnSmart to ensure a focus on content the student hasn’t learned while also promoting long-term retention of learned material. Learn more about this technology at LearnSmart.

Key Point: Its content helps you gain a deeper understanding of the concepts presented in the learning modules and in the textbook. Often, Key Point pages feature animations, games, videos, or other interactive learning resources.

Check Your Understanding: On Check Your Understanding pages, you will practice the module content you’ve covered using interactive study tools. These interactive study tools will help you assess your progress and identify areas for improvement. Additionally, interactives give you an opportunity to review and apply information presented in your course and in the online textbook before taking exams.

Exams: There will be 1 exam given at the end of each module for a total of 14. There will be questions that come directly from the textbook chapters, activities, and videos. Questions may come in the form of multiple choices, free response, or fill in the blank. Students will have 30 minutes to complete each exam. These exams are all on Connect. Please pay attention to the due dates. They are final and will not be extended. You must use a Remote Exam Proctoring software to proctor your exams (all 14 exams). You need to have both video and audio on. You need to start the recording prior to starting the test and end after finishing the test. Your face should be in the field of view.

Online Learning at SCU: MySCU is SCU’s online campus portal. It includes SCU’s learning management system (Canvas). It acts as a single point of access for a variety of campus information. It houses resources such as university policies, campus safety procedures, financial aid forms, class schedules, campus news, library databases, and other electronic resources for faculty, staff, and students. Incoming students receive login credentials and learn to navigate MySCU during orientation.

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.

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](#).