



Human Biology I | Lecture and Lab

**Academic Year 2020-2021**

## Course Information

### Course Numbers

BIO245/BIO245L

### 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 first in a two-part series covering a general study of human body, emphasizing basic concepts of human biology suitable for health science majors and as an elective for non-science majors. Concepts to be covered in this first part include: humans in the world of biology, cell and its chemistry, body organization and homeostasis, development through life emphasizing on mental disorders such as Autism Spectrum Disorder, chromosomes and cell division, stem cells, genetics and human inheritance, DNA and biotechnology, cancer, humans and their environment including their populations, limited resources, and pollution.

### 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)

Lecture: Human Biology: Concepts and Current Issues, Michael D Johnson 8th Edition, Pearson Education Inc. ISBN-13: 978-0134042435; ISBN-10: 0134042433

### Lab

SCU Human Biology I Laboratory Manual (available on Canvas)



## Course Purpose

### Student Learning Outcomes

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

1. Explain general principles in human biology.
2. Discuss biological levels of organization of living systems and the theory of evolution.
3. Identify the important components of the cell and its function as the basic unit of life.
4. Explain the basics of DNA structure, cell cycle and inheritance.
5. List important chemical elements, organic compounds and enzyme kinetics.
6. Interpret how energy is harvested, transformed and properly metabolized in biological systems.
7. Apply basic laboratory skills in the field of human biology.
8. Use standard microscopy to study cells.

## Course Schedule

(subject to slight modifications by the instructor)

Week	Lecture	Assessment
1	Module 1: Human Biology, Science, and Society Module 2: The Chemistry of Living Things	Reading Assignments Module Exams
2	Module 3: Structure and Function of Cells Module 4: From Cells to Organ Systems Module 5: Cell Reproduction and Differentiation	Reading Assignments Module Exams
3	Module 6: Cancer - Uncontrolled Cell Division and Differentiation Module 7: Genetics and Inheritance	Reading Assignments Module Exams
4	Module 8: DNA Technology and Genetic Engineering Module 9: Development, Maturation, Aging, and Death Module 10: Evolution and the Origins of Life	Reading Assignments Module Exams
5	Module 11: Ecosystems and Populations Module 12: Human Impacts, Biodiversity, and Environmental Issues	Reading Assignments Module Exams

## Tentative Grading Procedures

Lecture

Assessment	Points per assignment	Total number of assignments
Check Your Understanding Assignment	25	12 (1 per module)
Module Exam	50	12 (1 per module)

## Lab Schedule

(subject to slight modifications by the instructor)

Laboratory	Assessment
Scientific Method Metric System Organic Substances in the Cells	Lab Reports
Water, Acids, Bases and pH Enzymes in Living Tissues	Lab Reports
Microscope and Eukaryotic Cell Structure DNA The Foundation of Life,	Lab Reports Midterm Exam
DNA Extraction and Gel Electrophoresis The Cell Cycle & Mitosis, Patterns of Inheritance	Lab Reports
Review	Final Exam

## Tentative Grading Procedures

Lab

Assessment	Weight (%)
Lab reports	15
Midterm exam	35
Final exam	35
Participation	10
<b>Total</b>	<b>100</b>

## 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



## Academic Integrity

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

## Teaching Methods and Activities

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 12 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.

**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 12. 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 Canvas. Please pay attention to the due dates. They are final and will not be extended. You must use Remote Exam Proctoring software to proctor your exams (all 12 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

- Please print the learning objectives and use it as your study guide.
- Read the lecture outline and checkmark the objectives you have learned. Skim the chapter to find and learn the contents related to the learning objectives you did not learn by reading the lecture outline. Review each chapter to enhance your understanding of what was covered in the module. Watch the key points and take notes.
- Participate during online office hours and ask questions. Don't skip office hour or lab session, arrive late, or leave early. Ask questions for clarification when you don't understand the material.
- Stay on top of the assignments. Do the assigned problems as close to the time as when you review the topic to increase the depth of your understanding of specific concepts. This will help you learn the material more efficiently and effectively.
- Do not wait until the night before the assignment 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](#) .