

BIOL-105: HUMAN BIOLOGY

Effective Term

Fall 2026

CC Approval

12/05/2025

AS Approval

12/11/2025

BOT Approval

12/18/2025

COCI Approval

02/19/2026

SECTION A - Course Data Elements

CB04 Credit Status

Credit - Degree Applicable

Discipline

Minimum Qualifications	And/Or
Biological Sciences (Master's Degree)	

Subject Code

BIOL - Biology

Course Number

105

Department

Biology

Division

Science and Engineering (SE)

Full Course Title

Human Biology

Short Title

Human Biology

CB03 TOP Code

0401.00 - Biology, General

CB08 Basic Skills Status

NBS - Not Basic Skills

CB09 SAM Code

E - Non-Occupational

Rationale

Updated DEI.

SECTION B - Course Description

Catalog Course Description

A survey of human biology focusing on anatomy, physiology, cell development, tissues, organs, and organ systems. The course also covers molecular biology, genetics, human evolution, and diversity. Laboratories include microscopic observations, experiments, and animal dissections. This course is specifically designed for health occupations students as a prerequisite to Human Anatomy and Human Physiology, but is also designed for non-majors.

SECTION C - Conditions on Enrollment

Open Entry/Open Exit

No

Repeatability

Not Repeatable

Grading Options

Letter Grade or Pass/No Pass

Allow Audit

Yes

Requisites

Prerequisite(s)

Completion of a course taught at or above the level of intermediate algebra or Statistics (STAT-C1000) with a minimum grade of C or appropriate placement.

Corequisite(s)

Concurrent enrollment in or previous completion of CHEM-110 with a minimum grade of C.

Requisite Justification

Requisite Description

Course Not in a Sequence

Subject

CHEM

Course

110

Level of Scrutiny

Content Review

Upon entering this course, students should be able to:

1. Use of metric measurements.
2. Familiarity with atomic structure and bonding.
3. Conceptual understanding of reduce reactions.

SECTION D - Course Standards

Is this course variable unit?

No

Units

4.00

Lecture Hours

54.00

Lab Hours

54.00

Outside of Class Hours

108

Total Contact Hours

108

Total Student Hours

216

Distance Education Approval**Is this course offered through Distance Education?**

Yes

Online Delivery Methods

DE Modalities	Permanent or Emergency Only?
Hybrid	Permanent
Entirely Online	Permanent
Online with Proctored Exams	Permanent

SECTION E - Course Content**Student Learning Outcomes****Upon satisfactory completion of the course, students will be able to:**

1. Demonstrate a fundamental understanding of the anatomy and physiology of the major organ systems in humans.
2. Demonstrate a basic understanding of the scientific method.

Course Objectives**Upon satisfactory completion of the course, students will be able to:**

1. Apply scientific methodology to the study of human biology.
2. Apply basic principles of chemistry to human biology.
3. Describe the structure and function of cells and the processes of cell division (mitosis and meiosis).
4. Identify the major microscopic and macroscopic structural features of the human body.
5. Provide examples of the relationship between anatomical structures and body functions.
6. Identify the organ systems of the body and their major components and functions.
7. Describe the fundamental mechanisms of heredity and perform basic genetics calculations.
8. Describe some commonly encountered pathological and genetic conditions.
9. Discuss the function of the immune system in health and disease.

Course Content

The course content is drawn primarily from contemporary texts used in the field of human biology. This is supplemented with current articles from scientific journals. The lectures emphasize body function (physiology), while laboratory work focuses on structure (anatomy). Cell division and genetics are covered in both lecture and laboratory.

1. LECTURE OUTLINE

- a. Scientific method
- b. Organization of the human body and the concept of homeostasis
- c. Biological chemistry
- d. Cell biology including cell structure, cell division, cellular metabolism, DNA structure and replication, and protein synthesis
- e. Tissues
- f. Skin and the integumentary system
- g. The musculoskeletal system
- h. The nervous system including function, organization, integration, and physiology of neurons
- i. Endocrine system
- j. Cardiovascular system
- k. Composition and function of blood
- l. Body defenses and immunity
- m. Respiratory system
- n. Digestive system and enzymes
- o. Urinary system and osmoregulation
- p. Reproduction
- q. Human genetics

2. LABORATORY OUTLINE

- a. Laboratory safety
- b. Use of the light microscope
- c. Metric system and measurements
- d. Cell structure and division
- e. Biological chemistry and nutrition
- f. Body tissues
- g. Introduction to animal dissection
- h. Digestive system
- i. Blood and the cardiovascular system
- j. Skeletal system
- k. Human genetics

Methods of Instruction**Methods of Instruction**

Types	Examples of learning activities
Lecture	Lecture covering topics in course content with images
Discussion	Group discussion of relevant research and topics

Online Adaptation

Types	Examples of learning activities
Activity	
Directed Study	
Discussion	
Group Work	
Individualized Instruction	
Journal	
Lecture	

Instructor-Initiated Online Contact Types

Announcements/Bulletin Boards
 Chat Rooms
 Discussion Boards
 E-mail Communication
 Telephone Conversations
 Video or Teleconferencing

Student-Initiated Online Contact Types

Chat Rooms
 Discussions
 Group Work

Course design is accessible

Yes

Methods of Evaluation**Methods of Evaluation**

Types	Examples of classroom assessments
Exams/Tests	Lecture examinations will consist of objective questions in a variety of formats including short answer, multiple choice, and essay questions. Lab examinations involve identifying microscopic and macroscopic structures and relating them to their functions.
Quizzes	Quizzes will be short examinations dealing with both lecture material and laboratory exercises.

Homework	Homework assignments will include solving Medelian genetic calculations, chemistry problem sets, and keeping a food diary to perform a nutritional analysis of the student's diet.
Lab Activities	Students will perform laboratory exercises including using microscopes to examine and identify cellular structures and tissues; dissections of preserved animal specimens; identification of skeletal bones. Students will keep an organized lab notebook of their observations of anatomical, physiological, and genetic exercises performed in the laboratory. The lab notebook will be evaluated by the laboratory instructor.

Assignments

Reading Assignments

Selected readings from the required textbook and laboratory manual. For example: 1. Read chapter 1 from "Biology of Humans" covering the scientific method.
2. Read exercise 1 in the laboratory manual and summarize the procedures to be performed in lab.

Writing Assignments

Writing assignments are graded on scientific accuracy, organization, and correct use of English grammar and spelling.
For example:

1. Laboratory notebook
2. Dietary analysis
3. Genetic problem set
4. Chemistry problem set

SECTION F - Textbooks and Instructional Materials

Material Type

Textbook

Author

Goodenough and McGuire

Title

Biology of Humans: Concepts, Applications, and Issues

Edition/Version

6th

Publisher

Pearson Prentice Hall

Year

2017

Material Type

Textbook

Author

Mader and Windelspecht

Title

Human Biology

Edition/Version

14th

Publisher

McGraw Hill

Year

2016

Material Type

Textbook

Author

Johnson, M.

Title

Human Biology: Concepts and Current Issues

Edition/Version

9th

Publisher

Pearson

Year

2022

Material Type

Other required materials/supplies

Description

A lab fee may be required.

SECTION G - Diversity, Equity and Inclusivity**How does your course and/or course outline of record reflect strategies for accommodating and engaging diverse student populations, advancing equitable outcomes, and fostering inclusion for all students?**

This course supports diverse student populations through the use of multiple representations of concepts, varied applications, and technology. Strategies may also include collaborative learning, transparent assessment practices, low-cost resources, and opportunities for students to connect course material to their own experiences, fostering equitable outcomes and an inclusive classroom environment.

Course Codes (Admin Only)**CB00 State ID**

CCC000590096

CB10 Cooperative Work Experience Status

N - Is Not Part of a Cooperative Work Experience Education Program

CB11 Course Classification Status

Y - Credit Course

CB13 Special Class Status

N - The Course is Not an Approved Special Class

CB23 Funding Agency Category

Y - Not Applicable (Funding Not Used)

CB24 Program Course Status

Program Applicable

Allow Pass/No Pass

Yes

Only Pass/No Pass

No