# BIOL A125: HUMAN BIOLOGY

| Item | Value |
|---|---|
| Curriculum Committee Approval Date | 11/02/2022 |
| Top Code | 040100 - Biology, General |
| Units | 3 Total Units |
| Hours | 54 Total Hours (Lecture Hours 54) |
| Total Outside of Class Hours | 0 |
| Course Credit Status | Credit: Degree Applicable (D) |
| Material Fee | No |
| Basic Skills | Not Basic Skills (N) |
| Repeatable | No |
| Open Entry/Open Exit | No |
| Grading Policy | Standard Letter (S),<br>• Pass/No Pass (B) |
| Associate Arts Local General Education (GE) | • Area 5 Physical and Biological Sciences, Scientific Inquiry, Life Science (OB) |
| Associate Science Local General Education (GE) | • Area 5 Physical and Biological Sciences, Scientific Inquiry, Life (OSB) |
| California General Education Transfer Curriculum (Cal-GETC) | • Cal-GETC 5B Biological Sciences (5B) |
| Intersegmental General Education Transfer Curriculum (IGETC) | • IGETC 5B Biological Sciences (5B) |
| California State University General Education Breadth (CSU GE-Breadth) | • CSU B2 Life Science (B2) |

## Course Description

A transferable general education biology course for students not majoring in the life sciences. Emphasis on relationships of biology to human beings with emphasis on molecular genetics, heredity, major body systems, disease, and human interactions with the environment. Transfer Credit: CSU; UC.

## Course Level Student Learning Outcome(s)

1. Explain how the human body is organized from macromolecules to organ systems.
2. Discuss the impact of disease, drugs, and environment on the human body
3. Appraise how the human organ systems contribute to organismal homeostasis.

## Course Objectives

- 1. Demonstrate an understanding of the fundamentals of cell and molecular biology which they will apply in learning various topics relating to human biology.
- 2. Describe how human traits and genetic disorders are inherited.
- 3. Demonstrate knowledge of human disease processes and describe prevention behaviors which may reduce risks of disease acquisition and/or development
- 4. Describe various human body systems and how they relate to nutrition and health.
- 5. Demonstrate an understanding of human reproduction and development.
- 6. Describe how evolutionary principles apply to humans.

## Lecture Content

1. Biological background information to allow understanding of topics, including: Basic chemistry of atoms and molecules Structure and function of the biological macromolecules (protein, carbohydrate, lipid, nucleic acids) Eukaryotic and prokaryotic cell structure and function Basic molecular genetics including DNA replication, gene expression, mitosis, and meiosis Human Evolution and where humans fit in the biological classification of organisms The scientific method Viral and Bacterial human diseases, cancer, and the immune system Digestive system and Nutrition Nervous system and the effect of drugs Human reproduction and sexually transmitted disease Basics of the eleven human organ systems and how each contributes to the overall homeostasis of the organism. 2.Topics relating to Human Biology that are within the specialty of the instructor may be covered in addition to the above topics

## Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)

## Instructional Techniques

Illustrated lecture presentations, in-class discussions, in-class demonstrations and activities, group assignments, and out of class reading.

## Reading Assignments

Textbook reading assignments (2 hours per week for 16 weeks)

## Writing Assignments

In class assignments include activity worksheets that require written analyses of topics and data.

## Out-of-class Assignments

Viewing of lecture video modules, with accompanying short quiz (2 hours per week for 16 weeks) Material review, which includes worksheets, chapter studyguides, and/or exam reviews (3 hours per week for 16 weeks)

## Demonstration of Critical Thinking

The primary method of evaluation is exams (format determined by instructor) and quizzes. Additional evaluation may include written assignments, group assignments, and in-class activities

## Required Writing, Problem Solving, Skills Demonstration

Demonstration may be achieved through short answer/essay on exams or quizzes, in-class written assignments, a paper written on a human biology topic, and/or group presentations.

## Eligible Disciplines

Biological sciences: Master's degree in any biological science OR bachelor's degree in any biological science AND master's degree in

biochemistry, biophysics, or marine science OR the equivalent. Master's degree required.

## Textbooks Resources

1. Required Goodenough, J. and McGuire, B.. Biology of Humans, 6th ed. Boston: Pearson, 2017 Rationale: Rationale