

**BIOLOGY 120
HUMAN BIOLOGY**

BULLETIN INFORMATION

BIOL 120 - Human Biology (3 credit hours)

Course Description:

Fundamental principles of human biology. Credit may not be given for both BIOL 110 and BIOL 120.

Note: Three lecture hours per week. Not for major credit.

SAMPLE COURSE OVERVIEW

Topics will include study of the structure and function of cells, tissues, organs, and organ systems and how they interact to form the human body, effects of nutrition and exercise on human health, role of genetics and evolution on humans, and human impacts on the environment. The overall goal of the course is to help students become more scientifically literate so that they can make informed decisions on pertinent issues in science.

ITEMIZED LEARNING OUTCOMES

Upon successful completion of Biology 120, students will be able to:

1. Use the scientific method to solve problems in science and critically evaluate current issues in science and make informed decisions.
2. Explain the different levels of organization of life.
3. Demonstrate knowledge of the anatomy and physiology of human organs and organ systems and how they interact to form an organism.
4. Explain how nutrition and life style activities affect human health.
5. Discuss the role of infectious diseases on human health.
6. Demonstrate knowledge of and analyze the impact of humans on the environment and how information gained in the course can help reduce carbon footprints.
7. Demonstrate an understanding of the processes directing genetics and evolution and its impact on humans.
8. Demonstrate an understanding of articles and topics related to biology in newspapers, magazines, television, and the internet and evaluate the sources for validity.
9. Develop scientific literacy to construct and articulate reasoned arguments concerning a societal and ethical issue.

SAMPLE REQUIRED TEXTS/SUGGESTED READINGS/MATERIALS

1. Goodenough, J and McGuire B, A., *Biology of Humans: Concepts, Applications, and Issues*. 4th ed. 2012. Benjamin Cummings Publishers.

2. Other materials and assignments posted on Blackboard, YouTube films, Student Media CD ROM, Journal articles from the library and valid internet sources.

SAMPLE ASSIGNMENTS AND/OR EXAM

1. **Three Exams, Seven Quizzes:** will be composed of objective, short answer and essay questions. Material discussed through the online lecture and assigned for reading, will be covered on the quizzes and exams.
2. **Final Examination**
3. **Four Writing Assignments:** include short essays and summary papers structured to evaluate understanding of the scientific method and critically evaluate current issues in science. These assignments will test the students' ability to state a hypothesis, test it with available scientific literature, and derive useful conclusions that will enable them to make informed decisions about issues pertaining to human biology and medicine or environment

SAMPLE COURSE OUTLINE WITH TIMELINE OF TOPICS, READINGS/ASSIGNMENTS, EXAMS/PROJECTS

Week 1:

Class 1: Course Introduction:
Syllabus
Learning Outcomes
Grading Schema
Humans in the World of Biology- Ch. 1
Assignment 1

Class 2: Chemistry of Life
Ch. 2

Week 2

Class 3: Food Chemistry Ch. 2
Complete Quiz 1

Class 4: Cell Structure and Function- Ch. 3

Week 3

Class 5: Cell Structure and Function- Ch. 3
Assignment 2

Class 6: **Exam 1**

Week 4

Class 7: Body Organization- Ch. 4

Class 8: Skeletal System- Ch. 5

Week 5

Class 9: Muscular System- Ch. 6
Complete Quiz 2.

Class 10: Muscular Dystrophy- Ch. 6

Week 6

Class 11: Nervous System- Ch. 7

Class 12: Disorders of the Nervous System- Ch. 7
Complete Quiz 3.

Week 7

Class 13: **Exam 2**

Class 14: Cardiovascular System- Ch. 12

Week 8

Class 15: Diseases of the CVD- Ch. 12
Assignment 3

Class 16: Male Reproductive System- Ch. 17

Week 9

Class 17: Female Reproductive System- Ch. 17

Class 18: Bacteria- Ch. 17
Complete Quiz 4.

Week 10

Class 19: Bacterial STD's- Ch. 17

Class 20: Viruses- Ch. 17
Complete Quiz 5.

Week 11

Class 21: HIV/AIDS- Ch. 17

Class 22: **Exam 3**

Week 12

Class 23: Nutrition and Weight Control- Ch. 15

Assignment 4

Class 24: Patterns of Inheritance- Ch. 19-20

Week 13

Class 25: Biotechnology- Ch. 19-20

Class 26: Mitosis and Cancer- Ch. 19-20
Complete Quiz 6.

Week 14

Class 27: Human Evolution- Ch. 22

Class 28: Biodiversity
Climate Change- Ch. 23-24
Complete Quiz 7.

Final Exam according to University exam schedule