BIO 100 Course Outline as of Fall 2024

CATALOG INFORMATION

Dept and Nbr: BIO 100 Title: BASIC BIOLOGY SKILLS
Full Title: Basic Biology Skills
Last Reviewed: 9/25/2023

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	0	6	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00 Total Student Learning Hours: 157.50

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	

Catalog Description:
Students will learn in this class to apply basic study skills to the understanding of biological elements in living systems, from the level of atoms to ecosystems. A specific focus topic such as water will be used to relate learning skills to specific biological information. This course is designed for students who have not developed the skills necessary for successful completion of college transfer-level science courses.

Prerequisites/Corequisites:

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: Students will learn in this class to apply basic study skills to the understanding of biological elements in living systems, from the level of atoms to ecosystems. A specific focus topic such as water will be used to relate learning skills to specific biological information. This course is designed for students who have not developed the skills necessary for successful

completion of college transfer-level science courses. (Grade or P/NP)
Prerequisites/Corequisites:
Recommended:
Limits on Enrollment:
Transfer Credit:
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:

CSU Transfer:	Effective:	Inactive:
UC Transfer:	Effective:	Inactive:

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Student Learning Outcomes:
At the conclusion of this course, the student should be able to:
1. Utilize college skills including organizing classroom materials and applying active learning techniques.
2. Develop hypotheses using the scientific method.
3. Define the levels of biological organization and explain the importance of each in maintaining life.

Objectives:
At the conclusion of this course, the student should be able to:
1. Take effective course notes.
2. Apply concepts learned in biology to laboratory style observations and experiments.
3. Apply the methods of science to formulating and testing hypotheses.
4. Describe examples of the levels of biological organization from the atomic to the ecosystem scale.
5. Explain selected processes that govern the functioning of biological systems in cells, organisms, populations, and communities.
6. Apply general ideas about biological systems to one specific focus topic such as water.
7. Apply active learning techniques.

Topics and Scope:

I. Learning to Learn
   A. Active learning skills
   B. Biology in a lecture setting
   C. Preparing for exams

D. Organizational skills
II. The Methods of Science
A. Observation
B. Hypotheses
C. Deductive and inductive reasoning
III. Introduction to Molecules
A. Atomic structure
B. Chemical bonding
C. Macromolecules: carbohydrates, lipids, proteins, and nucleic acids
IV. Cells
A. Structure
B. Membranes
C. Transport
V. Organisms
A. Plants
B. Animals
C. Microorganisms
VI. Human Populations
A. Population growth
B. Effects on other biological organisms
VII. Community Interactions
A. Trophic levels: producers, consumers, and decomposers
B. Food chains and food webs
VIII. Ecosystems
A. Energy transformations
B. Nutrient cycles
C. Role of microorganisms in ecosystem processes
D. Local and regional ecosystem processes

Assignment:

1. Reading from text (approximately 150 pages)
2. Homework to include graphs, worksheets, and study guides (approximately 50 pages)
3. Classroom exercises to promote active learning and study skills
4. Midterm exam (1) and final exam (1)
5. Quizzes (8-10)

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Homework - study guides	Writing 10 - 30%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework - graphs and worksheets	Problem solving 5 - 20%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None	Skill Demonstrations 0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Midterm exam and final exam; quizzes	Exams 40 - 60%

Other: Includes any assessment tools that do not logically fit into the above categories.

Classroom participation and attendance	Other Category 10 - 25%

Representative Textbooks and Materials:
Instructor prepared materials