

BIOL 120 : General Biology II

A continuation of **BIOL 110** emphasizes the Animal and Plant Kingdoms in tissue structure, life patterns, comparative morphology and physiology, and categorization. Learner will be introduced to unifying concepts that include chemical structure of living matter, structure and function of the eukaryotic cell, including characteristics of plant and animal cells, respiration, photosynthetic pathways, genetics, and microevolution. Consideration will be given to the evolutionary and ecological interrelatedness between these and all life forms. This course will afford laboratory experiences to learners that give focus to basic biology. This is an introductory biology course designed for non-science majors.

Credits 4

Prerequisites

Any one of the MATH courses. LIBR 250 may be taken concurrently.

Prerequisite Courses

BIOL 110

MATH 110

MATH 120

MATH 250

LIBR 150

Course Outcomes

After successfully completing the course, the learner will be able to:

- List and explain the levels of animal classification between the taxa kingdom and phylum with regard to: levels of organization, types of body symmetry, and types of body cavities.
- Describe the anatomy and generalized life cycle of the tapeworm.
- Describe unique features of rotifers that distinguish them from other pseudocoelomates.
- Explain how the septate fluid-filled coelom is used by annelids for burrowing.
- Distinguish between causal and correlational relationships; recognize inquiry methods that lead to scientific knowledge;
- Describe and differentiate a scientific argument from a non-scientific argument; and reason by deduction, induction, and analogy.
- Describe advantages and disadvantages of an exoskeleton.
- Distinguish between hemocoel and coelom.
- Provide evidence of an evolutionary link between annelids and arthropods.
- Describe the structures and functions of the water vascular system of echinodermata including madreporite, stone canal, ring canal, radial canal, tube feet, ampulla, ampulacral groove.
- Describe the four unique characteristics of chordates.
- Distinguish between the three subphyla of chordates and give an example of each.
- Describe the specialized characteristics of vertebrates and explain how each is beneficial to survival.
- Provide an evolutionary plan for the vertebrate classes, provide majors characteristics of each class, and give examples of class members.
- Distinguish between monotreme, marsupial, and placenta mammals.
- Appraise the significance of the three most prominent misconceptions about human evolution.
- Explain how human have influenced the extinction rates of other organisms.

Competency

Scientific Reasoning