

Common Course Outline

BIOL 106

Zoology

4 Credits

Community College of Baltimore County

Description

BIOL 106 – 4 credits – Zoology introduces students to animal diversity, physiology and behavior through the lenses of evolution and ecology. Concepts of homeostasis are embedded throughout the course. Field trips to observe Maryland's animals and their habitats may be included.

4 Credits: 3 lecture hours; 3 laboratory hours

Prerequisites: ACLT 052 or ACLT 053, and MATH 073 or MATH 083

Overall Course Objectives

Upon completion of this course students will be able to:

1. compare and contrast animal anatomy by analyzing and interpreting models, diagrams, and animal specimens in collaboration with other students;
2. compare and contrast physiology of various animal groups;
3. apply the scientific method to questions of animal physiology or behavior;
4. explain principles of animal anatomy, physiology and behavior as they emerge through evolutionary development;
5. create and use dichotomous keys and type specimens to identify organisms;
6. discuss the origins and evolution of the various animal phyla;
7. compare and contrast the basic ecological interrelationships among animal phyla;
8. compare and contrast mechanisms of homeostasis among animal groups;
9. apply mathematics to explain genetic changes within a population;
10. discuss the interconnections among various animal communities and human populations; and
11. utilize appropriate resources to investigate questions of animal evolution, physiology, or behavior.

Major Topics

- I. Fundamentals of cell biology
- II. Taxonomy, phylogeny, genetics and evolution
- III. Reproduction and development
- IV. Mechanisms of homeostasis
- V. Major animal phyla
 - a. Unicellular organisms
 - b. Porifera

- c. Radiate phyla
 - d. Lophotrochozoan phyla
 - e. Ecdysozoan phyla
 - f. Deuterostome phyla
- VI. Ecology and behavior

Course Requirements

Grading procedures will be determined by the individual faculty member but will include a minimum of:

- three exams including a comprehensive final exam
- two lab practical exams
- one written assignment

Lab will account for 25 to 50% of the course. Students must earn at least 60% in both the lab and lecture portions of the course to pass the course.

Written Assignments: Students are required to utilize appropriate academic resources.

Other Course Information

This course is an approved 4-credit Biological and Physical Sciences General Education course that meets both the lecture and laboratory requirements.