



BIO 102 –General Biology II

COURSE PARTICULARS

Course Code: BIO 102

Course Title: General Biology II

No. of Units: 4

Course Duration: Three hours of theory and three hours of practical per week for 15 weeks.

Status: Compulsory

Course Email Address: bio102@gmail.com

Course Webpage: <http://www.bio.futa.edu.ng/courseschedule.php?coursecode=BIO%102>

Prerequisite: Nil

COURSE INSTRUCTORS

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COURSE DESCRIPTION

This course is explanatory and designed primarily for 100level students in biological sciences, agricultural sciences, environmental sciences and computer sciences. It introduces the students to adaptation, ecology and evolution of different groups of animals. Topics to be covered include a generalized survey of the animal kingdom based mainly on the study of similarities and differences in external features; ecological adaptation of animals; structural, functional and evolutionary study of protozoans, coelenterates, platyhelminthes, nematodes, annelids, arthropods, echinoderms and molluscs; evolutionary sequence in the form and functions of protochordates and various classes of vertebrates; introduction to ecology to include simple ecological facts in terrestrial and aquatic habitats and their relationship between an organism and its environment.

COURSE OBJECTIVES

The objectives of this course are to:

- give the detailed classification of animals.
- emphasize the similarities and differences between various classes of animals
- outline the structures and functions of animals.
- explain the evolutionary sequence that exist among the animals.
- explain the adaptations of organisms to their environment

COURSE LEARNING OUTCOMES / COMPETENCIES

Upon successful completion of this course, the student will be able to:

(Knowledge based)

- give detailed classification of animals.
- describe the external features of animals studied in this course.
- explain features for the adaptation of animals to their environment.
- make comparisons among animals using their similarities and differences.
- give specific examples of different groups of animals.

(Skills)

- identify various animals using their morphological characteristics
- make labelled drawings of named organisms.
- use hand lens and microscopes to study the external features of organisms.
- dissect animals such as toads to expose their internal organs.

GRADING SYSTEM FOR THE COURSE

This course will be graded as follows:

Class Attendance	5%
Practical	15%
Test(s)	20%
<u>Final Examination</u>	<u>60%</u>

TOTAL 100%

GENERAL INSTRUCTIONS

Attendance: It is expected that every student will be in class for lectures and also participate in all practical exercises. Attendance records will be kept and used to determine each person's qualification to sit for the final examination. In case of illness or other unavoidable cause of absence, the student must communicate as soon as possible with any of the instructors, indicating the reason for the absence.

Academic Integrity: Violations of academic integrity, including dishonesty in assignments, examinations, or other academic performances are prohibited. You are not allowed to make copies of another person's work and submit it as your own; that is plagiarism. All cases of academic dishonesty will be reported to the University Management for appropriate sanctions in accordance with the guidelines for handling students' misconduct as spelt out in the Students' Handbook.

Practical: Students are expected to submit practical reports as scheduled. Failure to submit report as and when due will earn you zero for that assignment. Only under extenuating circumstances, for which a student has notified any of the instructors in advance, will late submission be permitted.

Code of Conduct in Lecture Rooms and Laboratories: Students should turn off their cell phones during lectures and practicals. Students are prohibited from engaging in other activities (such as texting, watching videos, etc.) during lectures. Food and drinks are not permitted in the laboratories. No student will be allowed into the laboratories without a lab coat, practical book and manual.

READING LIST

¹Allan, J., R. Reed and W. Jonathan (2000). Practical Skills in Biology. Second Edition.

Longman Group Publishing, London, UK. 292p.

¹Arora, D.R and Arora B (2001). Medical Parasitology. Second Edition. CBS Publishers & Distributors, New Delhi.227pp

²Otubanjo, O.A.(2007). Elements of Parasitology. First Edition. Panaf Publishing Inc. Abuja, Nigeria.195p.

²Raven, P.H. and Johnson, G.B (2002) Biology. Sixth Edition. Mc GrawHill Inc. Boston.1237pp

Legend

1- Available as Personal Collection

2- Available in Departmental/School Libraries

3- Available on the Internet

COURSE OUTLINE

Week	Topic	Remarks
1 & 2	A generalized survey of the animal kingdom based mainly on study of similarities and differences in external features	During this first class, detailed classification of the kingdom animalia will be given to the students. Also, similarities and differences among different groups of animals will be discussed with particular emphasis on the external features.
3 & 4	Ecological adaptation of different groups of animals.	Features of adaptation in different groups of animals will be enumerated in this topic.
5 & 6	Structural, functional and evolutionary study of protozoans, coelenterates, platyhelminthes, nematodes, annelids, arthropods, echinoderms and molluscs	Evolution of animals from water to land will be discussed and emphasis will be placed on structures developed during evolution and importance of the structures to the organisms.
7,8 & 9	Evolutionary sequence in the form and functions of protochordates and various classes of vertebrates	Detailed classification, basic features and basic plans of chordates will be enumerated to students. Also, classification and characteristics of vertebrates will be elucidated.
		MID-SEMESTER TEST
10, 11 & 12	Introduction to ecology to include simple ecological facts in terrestrial and aquatic habitats	Basic concepts of ecology, ecological factors (biotic and abiotic) related to different habitats will be discuss extensively during the class.

13 & 14	Relationships between organism and its environment	The topic will include the interaction of different organisms with the environment. Biogeochemical cycles will be used to describe the interaction between organism and its environment.
15	Tutorials and revision	This is the week preceding the final examination. At this time, evaluation will be done to assess how far the students' expectations for the course have been met.