



THE FEDERAL UNIVERSITY OF TECHNOLOGY, AKURE

Department of Biology

BIO 101-General Biology 1

COURSE PARTICULARS

Course Code: BIO 101

Course Title: General Biology 1

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: bio101@gmail.com

Course Webpage: <http://www.fwt.futa.edu.ng/courseschedule.php?coursecode=BIO%20204>

Prerequisite: NIL

COURSE INSTRUCTORS

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COURSE DESCRIPTION

This course introduces the students to General Biology as a whole. The scope of Biology and its place in human welfare including characteristics of life, concepts in Biology, topical issues in Biology and career opportunities. Diversity and classification of living things. Cell structure and organization; functions of cellular organelles; diversity, general reproduction, interrelationship of organisms, heredity and evolution. Elements of ecology and types of habitat. Differences between plants and animals. Variation and life cycles of plants to include non-vascular plants like algae, fungi, bacteria, viruses, bryophytes and pteridophytes. Varieties and forms, life cycles and functions of flowering plants.

COURSE OBJECTIVES

The objectives of this course are to:

- Introduce students to basic concepts in Biology, scope of Biology and its place in human welfare,
- enable students to understand the diversity, classification of living things and differences between plants and animals,
- introduce students to cells as building units of organisms and functions of cellular organelles,
- familiarise the students with the transfer of characters from parents to offsprings and why variations exists among organisms of the same species and how organisms evolved,
- familiarise the students with life cycles of non-vascular and vascular plants,
- enable students to know the different types of habitats that exists all over the world.

COURSE LEARNING OUTCOMES / COMPETENCIES

After successful completion of this course, the student should be able to:

- understand meaning and concepts in Biology, career opportunities and use of Biology in Biological warfare;
- know the differences between plants and animals and their cells;
- know the interrelationships of organisms;
- understand heredity and evolution of organisms; similarities and variations among organisms of the same species,
- know the forms and life cycles of vascular and non-vascular plants,
- know the different types of habitats; aquatic and terrestrial habitats and their characteristics.

GRADING SYSTEM FOR THE COURSE

This course will be graded as follows:

Practicals	20%
Test(s)	20%
<u>Final Examination</u>	<u>60%</u>
<u>TOTAL</u>	<u>100%</u>

GENERAL INSTRUCTIONS

Attendance: It is compulsory for every student to attend lectures promptly, bearing in mind that whoever has less than 65% attendance will not be allowed to sit for the final examination. Students are expected to participate in all practical classes, do the necessary assignments and submit as at when due. Any complaints of inability to attend lectures, practical or do assignments should be communicated to the lecturer in charge indicating reasons. In case of illness, a medical report may be required. Attendance records will be kept by the course lecturer especially during practicals.

Academic Integrity: Violations of academic integrity, including dishonesty in assignments, practicals, 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.

Practicals and Assignments: Students will be divided into groups for the purpose of practicals. Practical files are expected to be submitted after each practical except otherwise stated. Students are expected to submit assignments as scheduled.

Code of Conduct in Lecture Rooms and Laboratories: Students are expected to be seated in class before the arrival of course lecturer. Late comers will have to stay outside until given permission by lecturer to come inside. Students should turn off their cell phones during lectures. Cell phones that make sound in class will be confiscated. 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.

Misconduct of any form will be faced with necessary disciplinary action.

*Students are expected to go through the regulations in their Handbook for clarity.

READING LIST

¹ Taylor, D.J, Green, N.P.O and Stout, G.W. (2002). Biological Science, Third Edition. Cambridge University Press, UK, 984p.

¹ Vines, A.E and Rees, N. (1982). Plant and Animal Biology. Volumes 1 and 2. Fourth Edition.

Pitman Books Limited, London. 1345p.

¹ General Biology textbooks for Advanced levels.

Legend

1- Available in the University and Departmental Libraries and bookstores

COURSE OUTLINE

Week	Topic	Remarks
1	The scope of Biology and its place in human welfare, concepts in Biology, topical issues in Biology and career opportunities.	This is a general overview of the course.
2	Characteristics of life, differences between plants and animals.	Students should be able to know the differences between plants and animals and their cells.
3&4	Diversity and classification of living things.	Students should be able to know how diverse organisms are and their classification.
5	Cell structure and organisation, functions of cellular organelles, cell diversity/types	Students should be able to know the different types of cells in organisms and functions of cell organelles.
6&7	General reproduction methods of organisms, interrelationships of organisms, heredity and evolution.	Students should be able to know how characters are transmitted from parents to offsprings and how organisms evolved.
8	Elements of ecology and types of habitats.	Students should be able to know the different types of habitats and their characteristics.

9&10	Variation, characteristics and life cycles of plants to include viruses, bacteria, algae and fungi	Forms and life cycles of non-vascular plants will be discussed.
11&12	Variation, characteristics and life cycles of plants to include bryophytes and pteridophytes.	Life cycles of bryophytes and pteridophytes will be discussed.
13	Varieties and forms, life cycles and functions of flowering plants.	The characteristics and functions of flowering plants will be discussed as well as their life cycles
14	Revisions and make up lectures.	
15	Tests.	