UNITED STATES INTERNATIONAL UNIVERSITY-AFRICA
NSC 3304: BIOLOGY AND THE ENVIRONMENT
COURSE SYLLABUS
CREDIT: 4 UNITS

COURSE DESCRIPTION

Relationship of living things to their physical and biotic environments; biological molecules and biotic processes, cell structure and function, evolution, heredity and genetics; species, diversity of life forms, ecosystems and the interdependence of ecosystem components.

COURSE OBJECTIVES

- To investigate the relationships between the abiota and the biota.
- To discuss cell structure and function as well as the structure of biological
- To examine genetics, heredity and evolution linking them to species and the diversity of life forms
- To discuss ecosystems and the interdependence of their components

COURSE CONTENT

Week 1
Living organisms and the environment

- A brief introduction to plant and animal kingdoms and the environments available to the.
- Physical factors in the environment
- Biotic factors

Week 2
Biological molecules

Biological molecules; structure and bonds between the elements (Proteins, Carbohydrates, Lipids, DNA)

Week 3
Biological processes

Biological processes such as respiration, photosynthesis as examples of ANABOLISM AND CATABOLISM.

Week 4
The cell

- structure of the plant cell
- Structure of the animal cell

Week 5

- Function of cell organelles and the cell as a whole
- Brief introduction on types of cells, tissues and organs

Week 6

Genetics

- Introduction of the gene concept using DNA structure

- Laws of inheritance; Gregor Mendel and simple inheritance examples

MID-QUARTER EXAM

Week 7

Heredity

- Examples of inheritance using the set laws

Week 8

Evolution

- Theories of evolution (catastrophism, derivinism, etc)
- Speciation and modern day perceptions of evolution; influences of beliefs on people in society

Week 9

Ecosystems

Ecosystems on land and water. Simple food and energy flow patterns

Week 10

Ecosystems

- Abiotic and biotic component interactions in ecosystems
- Simple nutrient cycles

COURSE EVALUATION

Participation	10%
Home assignments	10%
Term paper	20%
Mid-quarter exam	30%
Final Examination	30%

GRADING.

A	90 - 100
A-	87 - 89
B+	84 - 86
B	80 - 83
B-	77 - 79
C+	74 - 76
C	70 - 73
C-	67 - 69
D+	64 - 66
D	62 - 63
D-	60 - 61
F	0 - 59