



COURSE COMPACT

Faculty:	Faculty of Science
Department:	Biological Sciences
Course Code:	BIO 111
Course Title:	General Biology I
Units:	3
Course Lecturer:	Mrs. Fagbemi Oluwabusayo Tosin
Semester:	First
Session:	2019/2020
Location:	Lecture room

A. Brief Overview of Course

The course introduces students to the origin of life and the organization of life. The topics to be covered are as follows: Origin of life and influence of living things on the chemistry of the Earth; Essentials of life, including sources and use of energy, Responsiveness to natural selection; Cell structure and organization, Functions of cellular organelles; Diversity, Characteristics and Classification of living things; General reproduction; Heredity and evolution; Interrelationship of organisms, elements of Ecology and types of habitat.

B. Course Objectives/Goals

The objectives of this course are to:

- Describe the origin of life and influence of the activities of living things on Earth.
- Explain the various sources of energy available to plants and animals
- Explain the concept of cell structure, functions of cellular organelles, and cellular organization.

- Describe the classification of living organisms, enumerating the various similarities and differences found among organisms at each level of classification.
- Explain the various types of reproduction methods in living organisms.
- Discuss in details the theories of Heredity and Evolution.
- Explain in details the concept of Ecology.

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

- ◆ Describe the concepts of Global warming and other effects of the activities of living things on Earth.
- ◆ Explain the similarities and differences between plant and animal cells as well as stating the functions of their cellular organelles.
- ◆ Discuss the various levels of classification of living organisms, and state examples of each.
- ◆ Explain the difference between Sexual and Asexual reproduction, as well as describe the various methods of reproduction in plants and animals.
- ◆ Describe how the gender of a foetus is determined during sexual reproduction in animals.
- ◆ Explain the principles of Mendelian Genetics as it relates to Heredity.
- ◆ Describe the types of Ecosystems and explain basic Ecological terms as well as interrelationship between organisms in various Ecosystems.

C. Methods of Lecture Delivery/Teaching Aids

- Lecture Delivery Methods
 - Interactive classroom session
 - Individual assignments
 - Lecture notes
- Teaching Aids
 - Multimedia projection
 - Google images
 - Youtube

D. Course Outlines

- Modules & Details of Topics

Module I: Cell structure and organization, Functions of cellular organelles

Week 1: Definition of cell, Concept of Cell theory, Cellular organelles

Week 2: Differences between plant and animal cell, Cellular organization.

Module II: Origin of life and influence of living things on the Chemistry of the Earth.

Week 3: The Origin of Life, The Evolution of the Atmosphere, Greenhouse Effect and Global Warming, Human Impacts on Planet Earth.

Module III: Essentials of life, including sources and use of energy, responsiveness to natural selection

Week 4: Characteristics essential to life and living things, Sources of Energy, Concept of Natural Selection.

Continuous Assessment Test One

Module IV: Diversity, characteristics and classification of living things

Weeks 5, 6 and 7: Diversity of life, Hierarchical classification of living things, Scientific naming.

Mid-Semester Test

Module V: General Reproduction

Weeks 8 and 9: Sexual and Asexual reproduction in Plants, Sexual and Asexual Reproduction in Animals

Module VI: Heredity and Evolution

Week 10: Heredity, Gregor Mendel's Laws of Inheritance, Terminologies used in Genetics

Module VII: Interrelationship of organisms, elements of ecology and types of habitat.

Weeks 11 and 12: Interrelationship of organisms, elements of ecology and types of habitat.

Week 13: Revision and Continuous Assessment Test Two

E. Structure of the Programme/Method of Grading

Continuous Assessment

- Class test/Assignments 20 Marks

- Mid Semester test 10 Marks

Examination 70 Marks

TOTAL 100

F. Ground Rules & Regulations

- 75% attendance is required to sit for the examination.
- Assignments must be submitted as at when due.
- Contributions to group discussion and class work are noted.

G. Contemporary Issues/ Societal Relevance

The major effect of Global warming on Humans is Climate change. The effects of climate change in turn, will be economic, social, and environmental. This effect will alter people's lives in a myriad of ways that we are just beginning to understand. Acceptance of this complex interaction, which follows the prescription laid out by the concept of sustainable development, is key to beginning to enact effective policy on climate. Climate change is poised to make matters worse for farmers through a shift in climate and agricultural zones, changes in production patterns due to higher temperatures, and more extreme and changing precipitation patterns all of which threaten crops. Such an upset has the potential to take away families' livelihoods and main source of income as well as hurt entire communities who depend on selling the fruit (and veggies) of their labor. Small farmers are an integral part of our societies and, consequently, the effects of climate change on farmers can threaten food supplies and security as well as increase volatility in global food prices. ©

huffpost.com

H. Recommended Reading/Text

A) Campbell Biology by Lisa A. Urry, Michael L. Cain, Steven A. Wasserman, Peter V. Minorsky, Jane B. Reece. (Published by Pearson, 2016).

B) Biology 11th Edition by Peter Raven and George Johnson. (Published by Mc-Graw Hill Education, 2016).

C) Biology 13th Edition by Sylvia Mader and Michael Windelspecht. (Published by Mc- Graw Hill Education, 2018).