LEAD CITY UNIVERSITY, IBADAN

Faculty of Sciences

Department of Microbiology/Biology

COURSE PARTICULARS

Course code: BIO 311
Course title: Evolution
No. of Units: 2
Status: Compulsory

LECTURER DETAILS

Name: Dr. Adedapo O. Adeogun
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COURSE DESCRIPTION

BIO 311 entails current concepts in evolution. Geological periods and epochs. Genetic variation and speciation. Evolution of selected organisms

COURSE OBJECTIVES

To enable students understand the historical concept of evolution, Population genetics, and gene frequency/equilibrium.

ASSESSMENT

Coursework and attendance	40marks
Final Examination	60marks

LECTURE PLAN

Week 1:	History of Evolution thought
Week 2:	Mechanisms of evolution
Week 3:	Mutation
Week 4:	Outcomes of evolution
Week 5, 6 & 7:	Population Genetics
Week 8 & 9:	Evolutionary variation
Week 10 & 11:	Genetic variation
Week 12:	Origin of life
Week 13:	Evidence of evolution, adaptation and speciation
Wee 14:	Classification and Phylogeny, Geological period and Epoch
Week 15:	Revision

READING LIST

The Descent of Man by Charles Darwin; The Origin of Species by Charles Darwin; Evolution from *The Internet Encyclopedia of Philosophy;* A History of Evolutionary Thought; Timeline of Evolutionary Thought; Lamarck and his Theory of Evolution by Thomas E. Hart from *The Victorian Web.*

Susan L. Elrod and William D. Stansfield (2010). Genetics. Fifth Edition.

TUTORIAL QUESTIONS

1. Discuss any three biological conceptions of evolution.
2. Discuss extensively, the contribution of Charles Darwin to the concept of evolution.
3. Discuss any two mechanisms that can lead to changes in allele frequencies in a population.
4. Discuss three major outcomes of evolution you know.
5. List and discuss the five Hardy-Weingberg assumptions.
6. What is mutation? Discuss briefly, the different types of mutation
7. Explain the origin of life. List five probable stages involved in the origin of life

8. List and discuss three evidence of evolution that you know.

9. Adaptation is the evolutionary process whereby an organism becomes better able to live in its habitat or habitats. Discuss

10. a. Name the Scientists who proposed:
    (i) Binomial nomenclature
    (ii) Five kingdom classification
    b. Name the categories above order level in a correct sequence.
    c. Differentiate between prokaryotes and Eukaryotes