



LEAD CITY UNIVERSITY, IBADAN
Faculty of Sciences
Department of Microbiology/Biology

COURSE PARTICULARS

Course code: ZOO 413
Course title: Comparative vertebrate embryology
No. of Units: 2
Status: Required

LECTURER DETAILS

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COURSE DESCRIPTION

ZOO 413 is a multidisciplinary field that entails research-driven knowledge and experience in a broad range vertebral associations

COURSE OBJECTIVES

The general objective is to enable the student to understand the development and morphology of group vertebrates as a whole.

ASSESSMENT

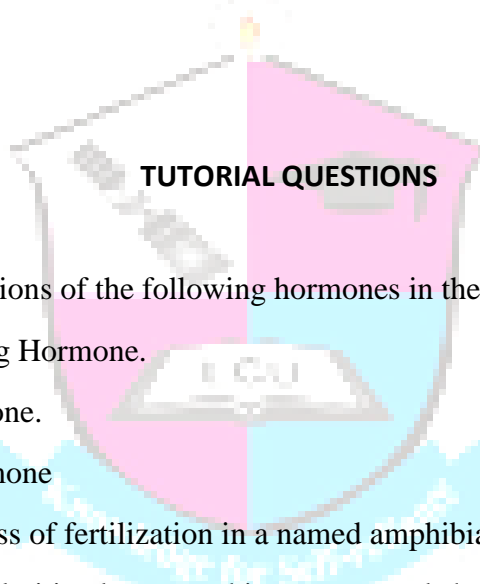
Coursework and attendance	40marks
Final Examination	60marks

LECTURE PLAN

Weeks 1 & 2:	Introduction: Testes, Ovary and the development of sex cells
Week 3 & 4:	Transportation of gametes and fertilization
Week 5 & 6:	Cleavage, Gastrulation and Blastulation
Week 7 & 8:	Tubulation and Extension of Major Organs
Week 9 & 10:	Histogenesis and Morphogenesis of Organ systems
Week 11 & 12:	Care and Nourishment of the Developing Embryo
Week 13 & 14:	Revision

READING LIST

Comparative Embryology of the Vertebrates. Olin E. Nelsen. MCGRAW-HILL BOOK COMPANY, INC.



1. State in brief the functions of the following hormones in the preparation of gametes:
 - (a) Follicle Stimulating Hormone.
 - (b) Luteinizing Hormone.
 - (c) Luteotrophin Hormone
2.
 - (a) Describe the process of fertilization in a named amphibian.
 - (b) What are the similarities between this process and that of fishes which lay pelagic eggs?
3. With the aid of well labelled diagrams, describe the process of fertilization in *Ascaris*.
4.
 - (a) What do you understand by "Holoblastic Cleavage"?
 - (b) Describe the process in *Amphioxus*.
5. The word Meroblastic cleavage is an adjective which refers to a part of the germ, discuss extensively using named examples.
6. Compare and contrast the process of gastrulation in *Amphioxus* and a named *Rana species*.
7. Using well labelled diagrams, illustrate the different types of body forms in four different vertebrates during embryonic development.
8. Describe in detail, the development of skin in the embryo of *Squalus acanthias*.

9. Describe in brief, development of the skin of a named mammal.
10. Give a detailed account of the development of gills in a named amphibian.
11. Give a detailed account of the development of lungs in chick.

