

Semester Lecture Plan

Name of College: Government College of Arts, Science & Commerce, Sanquelim Goa

Name of Faculty: Dr Suman Tari

Subject: Zoology

Paper code: ZOO 204: Vertebrate Anatomy

Program/Course: TY B.Sc.

Division: A

Academic year: 2024 - 2025

Semester: IV

Total Lectures: 45

Course Objectives:

1. Understand the basic principles of vertebrate anatomy and its significance in biology.
2. Preparing learners for understanding the structural and functional body system of the vertebrates.
3. Introducing the anatomy of different systems in vertebrates.
4. Analysing the structural modifications in anatomy of different groups vertebrates.

Course Learning Outcome:

At the end of the course student will be able to:

1. Explain structural and functional diversity of chordates
2. Understand anatomical structures and their functions in vertebrates including humans
3. Analyze the modifications and anatomical relationship among the vertebrates which will help them to have better understanding of physiological processes and evolution.

4. Take up research in biological sciences in the field of anatomy, physiology and evolutionary relationship amongst vertebrates

Month	Lectures From: To:		No. of lectures allotted	Topic, Subtopic to be covered	Learning outcome	ICT Tools	Reference books
December	09/12/2024	14/12/2024	03	Integumentary System Skeleton System and Digestive system Integument: Basic structure and prominent functions of Vertebrate Integument <hr/> Functions of derivatives of integument <hr/>		Power point presentation	Life of Vertebrates by J.Z. Young
	16/12/24	21/12/2024	03	Epidermal derivatives (Mucous glands and Mammary glands, Claws In reptiles and birds			
January	02/01/25	8/01/25	03	Nails in mammals)), Dermal derivatives (Scales in fishes			
	09/01/25	15/01/2025	03	Overview of axial and appendicular skeleton: Atlas and Axis vertebrae (Fish and Rat), Pectoral and Pelvic girdles (Frog and Fowl			

	16/01/2025	22/01/2025	03	Study of Monogastric, Avian and Ruminant vertebrates Digestive system and digestive glands			
	23/01/2025	29/01/2025	03	Circulatory System, Respiratory System and Nervous system Circulatory System: Outline of the Single circulation two chambered heart and aortic arches - (Shark)			
				Outline of the Double circulation three chambered heart and aortic arches of Amphibian. Outline of the Double circulation four chambered Avian and mammalian hearts and aortic arches.			
February	30/01/2025	05/02/2025	03				
	06/02/2025	12/02/2025	03	Respiratory system Septal gills of Shark and Opercular gills of teleost			

				Cutaneous respiratory organs Gross anatomy of the mammalian respiratory system			
	13/02/2025	19/02/2025	03	Gross anatomy of the mammalian respiratory system			
	20/02/2025	26/02/2025	03	Nervous System Outline of the Brain of the Non-mammalians vertebrates (Fish)			
	27/02/2025	05/03/2025	03	Outline of the Brain of the Non-mammalians vertebrates (Reptile and Bird)			
March	06/03/2025	12/03/2025	03	Outline of the Brain of the Mammalian vertebrates (Rat)			
	13/03/2025	19/03/2025	03	Overview of types and functions of sense organs. Types according to the source of stimuli: Types according to location of stimulus; Somatic and visceral receptors			
	20/03/2025	26/03/2025	03	Urinogenital System , and reproductive system			

				Overview of the structure of Pronephros.			
				Overview of the structure of Mesonephros and Metanephros Kidneys			
	27/03/2025	02/04/2025	03	Overview of the Urinogenital systems in anamniotes (Bony fish)			
	03/04/2025	9/04/2025	03	Overview of the Urinogenital systems in and in amniotes (Reptiles)			
	10/04/2025	11/04/2025	03	Outline of male and female reproductive systems in mammals (Rat/ humans)			

Dr Suman V Tari

Teacher-in-charge

