Lecture Plan

Name of the College: Government College of Arts, Science and Commerce. Sanquelim- Goa

Name of Faculty: Dr. Suphala Pujari	**Subject: Zoology**	
Paper code: ZOO 302	**Program: T.Y. BSc**	**Division: A**
Academic year: 2025- 2026	**Semester:V**	**Total Lectures: 60**

Course Objectives: To learn the mechanism of integrative physiology.

Expected Course Outcome: Sound practical knowledge of endocrine system

Student Learning Outcome: Students will gain knowledge of the mechanism of homeostasis through hormonal regulation

Month	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
June	23/06/2025	28/06/2026	3	Unit I - Evolutionary Significance of endocrine system, Hypothalamus-Hypophysis: • Evolutionary Significance of Endocrine System • Homeostasis: Role of endocrine system in maintaining 'fixity of internal milieu' (Maintenance of normal Glycemia)		PPT	
June/July	30/06/2025	05/07/2025	3	• Maintenance of calcium balance • Types of hormones and mechanisms of hormone action. • Hypothalamo-Hypophysial-Target Organ axis		PPT	

July	07/07/2025	12/07/2025	3	• Feedback mechanisms. • Hypothalamic Neurohormones (Hypophysiotropic Hormones) and their sources, communication between hypothalamus and Pituitary (Adenohypophysis and Neurohypophysis), angioarchitecture of hypophysial portal system and its significance.		PPT	
July	14/07/2025	19/07/2025	3	• Divisions of Pituitary and Histology of Adenohypophysial Pars distalis (Tinctorial affinity, Immuno-histochemical typing, Ultrastructural signatures, Immuno-electron microscopy) • Trophic hormones of anterior Pituitary and their targets		PPT	
July	21/07/2025	26/07/2025	3	• Hormones stored and released by Neurohypophysis and their functions. • Disorders caused by excess and deficit of Pituitary hormones: Dwarfism, Gigantism and Acromegaly, Prolactinomas, Diabetes insipidus.		PPT	
July/August	28/07/2025	02/08/2025	3	Histology, hormones, Functions and disorders. • Location and Histology of Thyroid Gland • Hormones of the Thyroid gland Tri-iodo-thyroxine (T3) and Tetra-iodo-thyroxine (T4)		PPT	
August	04/08/2025	09/08/2025	3	• Neuro-endocrine mechanism for control of Thyroid function. • Hyperthyroidism and hypothyroidism, Hashimoto's Thyroiditis, Grave's Disease. • Histology of Parathyroid gland (Chief cells and Oxyphil cells and their functions)		PPT	
July/August	11/08/2025	16/08/2025	3	• Disorders of Parathyroid:		PPT	

				Hyperparathyroidism and hypoparathyroidism • Location and histology of Adrenal Gland • Hypothalamic-Pituitary-Adrenal (HPA) Axis			
August	18/08/2025	23/08/2025	3	• Adreno-cortical hormone secretions (Mineralocorticoids, Glucocorticoids, and sex Hormones)		PPT	
August	25/08/2025	25/08/2025	1	• Adreno-medullary Hormones/ Neurotransmitters (Epinephrine and Norepinephrine) and their functions.		PPT	
August	02/09/2025	06/09/2025	2				
September	08/09/2025	13/09/2025	3	• Disorders of Adrenal: Addison's Disease and Cushing's Syndrome • End-of-module case-based discussion or short answer test		PPT	
September	15/09/2025	20/09/2025	3	MODULE III: Gonads, Gonadal Hormones and Disorders. • Location, histology, and hypothalamic control of Testes with special reference to endocrine cellular components (Interstitial Cells of Leydig) and their secretion and gametogenic function.		PPT	
September	22//09/2025	27/09/2025	3	• Disorders of Hypogonadism/ 'low T': Infertility, Gynaecomastia and Erectile Dysfunction		PPT	
September	29/09/2025	04/10/2025	3	• Location, histology and hypothalamic control of Ovaries, Graafian Follicle, its cells and their secretions and gametogenic function.		PPT	
October	06/10/2025	11/10/2025	3	• Endocrine control of Ovulation and Luteinisation. Corpus luteum, Corpus haemorrhagicus and Corpus albicans		PPT	
October	13/10/2025	18/10/2025	3	• Disorders: Amenorrhea (Primary & Secondary), Stein- Leventhal Syndrome, Infertility, Progesterone deficit and miscarriage		PPT	