

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: 2026 -2027			Semester: V			Total Lectures: 45	
Course Objectives: 1. Acquaint the learners with mechanisms of physiological homeostasis. 2. Provide the learners with understanding of the neuroendocrine-target organ communication. 3. Understand the importance of hormones 4. Outline the disorders of endocrine glands.							
Expected Course Outcome: At the end of this course, students will be able to: 1. Appreciate the role of endocrine system in homeostasis. 2. Explain the location and role of major endocrine glands. 3. Analyse the various endocrine disorders. 4. Demonstrate the techniques involved in histology.							
Month	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
June	22/06/2026	27/06/2026	3	Unit I - Evolutionary Significance of endocrine system, Evolutionary Significance of Endocrine System – Introduction, Homeostasis: Role of endocrine system in maintaining ‘fixity of internal milieu’ (Maintenance of normal Glycemia)		PPT	1. A. J. Zeleznik, and T. M. Plant, Knobil and Neill’s Physiology of Reproduction, Vol I & II, Raven Press, New York, 2015.

June/July	29/06/2026	05/07/2026	3	Maintenance of electrolytes balance and calcium, Types of hormones and mechanisms of hormone action.		PPT	2. C. D. Turner, and J. T. Bagnara, General Endocrinology, Saunders Press, 2012.
July	06/07/2026	11/07/2026	3	Hypothalamo-Hypophyseal-Target Organ axis and feedback mechanisms, Hypothalamic Neurohormones (Hypophysiotropic Hormones) and their sources, communication between hypothalamus and Pituitary (Adenohypophysis and Neurohypophysis), angioarchitecture of hypophyseal portal system and its significance.		PPT	3. D. O. Norris, Vertebrate Endocrinology, 5th Edition, Academic Press Inc., 2013.
July	13/07/2026	18/07/2026	3	Divisions of Pituitary and Histology of Adenohypophyseal Pars distalis (Tinctorial affinity, Immuno-histochemical typing, Ultrastructural signatures, Immuno-electron microscopy) , Trophic hormones of anterior Pituitary and their targets		PPT	4. E. J. W. Barington, Hormones and Evolution, Vol I & II Academic Press, New York, 1979.
July	20/07/2026	25/07/2026	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	5. J. F. Laycock, and P. H. Wise, Essential Endocrinology, Oxford University Press, 1996.
July/August	27/07/2026	01/08/2026	3	MODULE II: Thyroid, Parathyroid and Adrenal Glands: 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) . Neuro-endocrine mechanism for control of Thyroid function.		PPT	6. M. E. Hadley, and J. E. Levine, Endocrinology, 6th Edition. Pearson Education Inc., New Jersey, 2009.
August	03/08/2026	08/08/2026	3	Hyperthyroidism and hypothyroidism, Hashimoto's Thyroiditis, Grave's Disease. Histology of Parathyroid gland (Chief cells and Oxyphil cells and their functions), Disorders of Parathyroid: Hyperparathyroidism and hypoparathyroidism		PPT	7. S. Melmed, K. S. Polonsky, P. R. Larsen, and H. M. Kronenberg, Williams Textbook of Endocrinology, Saunders Press, London, 2011.
August	10/08/2026	15/08/2026	3	Location and histology of Adrenal Gland, Hypothalamic-Pituitary-Adrenal (HPA) Axis		PPT	8. S. Nussey, and S. Whitehead, Endocrinology: An Integrated

							Approach, Oxford: BIOS Scientific Publishers, 2001.
August	17/08/2026	22/08/2026	3	Adreno-cortical hormone secretions (Mineralocorticoids, Glucocorticoids, and sex Hormones), Adreno-medullary Hormones/ Neurotransmitters (Epinephrine and, Norepinephrine) and their functions.		PPT	
August	24/08/2026	29/08/2026	3	Disorders of Adrenal: Addison's Disease and Cushing's Syndrome, End-of-module case-based discussion or short answer test		PPT	
August/Sept	31/08/2026	05/09/2026	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	7/09/2026	12/09/2026	3	Disorders of Hypogonadism/ 'low T': Infertility, Gynaecomastia and Erectile Dysfunction		PPT	
September	21/09/2026	26/09/2026	3	Location, histology and hypothalamic control of Ovaries, Graafian Follicle, its cells and their secretions and gametogenic function.		PPT	
September	28/09/2026	03/10/2026	3	Endocrine control of Ovulation and Luteinization. Corpus luteum, Corpus haemorrhagicus and Corpus albicans		PPT	
October	05/10/2026	10/10/2026	3	Disorders: Amenorrhea (Primary & Secondary), Stein-Leventhal Syndrome, Infertility, Progesterone deficit and miscarriage.		PPT	
October	12/10/2026	14/10/2026	2	Revision/ End-of-module case-based discussion or short answer test		PPT	