

SEMESTER LECTURE PLAN							
Name of the College: Government College of Arts, Science and Commerce. Sanquelim - Goa							
Name of Faculty: Ms. Mithali Halarnkar				Subject: Zoology			
Course code: ZOO-141 Skills for Zoologists			Program: F.Y. BSc			Division: A	
Academic year: 2025 - 26			Semester: I			Total Lectures: 15	
Course Objectives: 1. Recognize skills of observation and data collection in field. 2. Develop fundamental skills required for zoological research and field work. 3. Understand taxonomic methods for identifying and classifying animal species. 4. Teach protocols of handling hazardous waste, biomedical waste, and biological specimens.							
Course Learning Outcome: At the end of the course, students will be able to: 1. Demonstrate skills for observations of specimen in the field. 2. Use the common/ basic field and laboratory equipment. 3. Develop strategies to work effectively in ‘field’ and biological laboratory. 4. Plan safety protocols for ‘field’ and laboratory work.							
Month	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books

June - July	30/06/2025	05/07/2025	1	Introduction to the concept of ‘field’		Blackboard, Power point, You Tube, Google classroom	A. Upadhyay, K. Upadhyay, and N. Nath, Biophysical Chemistry Principles & Techniques Handbook. Himalaya Publishing House, 2003. D. M. Harmening, Laboratory Management, Principles and Processes, 3rd ed. D.H. Publishing & Consulting Inc., 2012. I. H. Segel, Biochemical Calculations, 2nd ed. New York: John Wiley and Sons, 1997. R. H. Linville, and H. A. Kelly, A Guide for Laboratory and Field Work in Zoology, Boston: Ginn & Co., 2019. S. S. Lal, Practical Zoology: Vertebrate. Rastogi Publication, 2019.
July	07/07/2025	12/07/2025	1	Rationale for the need to acquire field skills and Ethics of sustainable field work.			
July	14/07/2025	19/07/2025	1	Introduction to basic field instruments (Binoculars, Camera, Spotting-Scope)			
July	21/07/2025	26/07/2025	1	Introduction to basic field instruments (Range Finders, Hygro-thermometer, Lux meter, Anemometer)			
July August	28/07/2025	02/08/2025	1	Observational skills.		Blackboard, Power point, You Tube, Google classroom	
August	04/08/2025	09/08/2025	1	Dress-code and conduct in the field. Use of taxonomic keys/ field guides/ maps			
August	11/08/2025	16/08/2025	1	Dress-code and conduct in the field. Use of taxonomic keys/ field guides/ maps		Blackboard, Power point, You Tube	
August	18/08/2025	23/08/2025	1	Animal handling, Record keeping and maintaining field diary.		Blackboard, Power point, You Tube, Google classroom	
September	01/09/2025	06/09/2025	1	Principles and practices of Laboratory safety and conduct – Safety signages, hazards and precautions.			
September	08/09/2025	13/09/2025	1	Concept of Biosafety levels, Use of personal safety gears; animal/ microbial, chemical and hazardous material disposal.			
September	15/09/2025	20/09/2025	1	Handling and maintaining biological specimens.			
September	22/09/2025	27/09/2025	1	Laboratory instruments- Handling,		Blackboard,	

ber	25	25		care and applications of Microscopy, Colorimetry/ spectrophotometer,		Power point, You Tube, Google classroom	
September October	29/09/2024	04/10/2024	1	Laboratory instruments- pH meter, Centrifuge, Chromatography, Electrophoresis.			
October	06/10/2025	11/10/2025	1	Systems of Units;			
October	13/10/2025	18/10/2025	1	Concentrations: (Percent solutions, ppt, ppm, ppb dilutions, Normality, Molarity and Molality).		Blackboard, Power point, You Tube, Google classroom	

*** Assessment
Rubrics**

Component	Max Marks
ISA 1	05
ISA 2	05
Semester End Exam	40