

		Practical Plan			
Name of the college: Govt. College of Arts, Science and Commerce, Sanquelim - Goa					
Name of Faculty: Dr. Suphala Pujari		Subject: Zoology			
Paper code:ZOO – 141 (Practical)		Program: FY BSc		Division: A	
Academic year: 2026- 2027		Semester: I		Total Practicals/Labs: 13	
Credits:	02				
Course Objectives:1. Recognize skills of observation and data collection in field. 2. Develop fundamental skills required for zoological research and fieldwork. 3. Understand taxonomic methods for identifying and classifying animal species. 4. Teach protocols of handling hazardous waste, biomedical waste, and biological specimens.					
Expected Course 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.					
Student 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	Practicals/Labs Scheduled Date	No. of Practicals/ Labs planned	List of Experiments	Reference books	
June	25/06/2026	1	Safety and conduct in a laboratory (Interpretation of safety symbols)	Upadhyay, K. Upadhyay, and N. Nath, Biophysical Chemistry Principles & Techniques Handbook. Himalaya Publishing House, 2003.	
July	02/07/2026	1	Sterilization and handling of laboratory glassware/ fluids/ reagents/ media (dry heat, wet heat, filtration, radiation (UV))		
July	9/07/2026	1	Preparation of solutions.		

	16/07/2026	1	Handling laboratory instruments (at least four)	• 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.
	23/07/2026	1	Study of parts of microscope and their functions; types, handling, and use.	
	30/07/2026	1	Types of staining techniques (Simple, Differential, Vital and Negative)	
August	06/08/2026	1	Chromatography (Paper and TLC) (demonstration).	
	13/08/2026	1	Gel Electrophoresis (demonstration).	
	20/08/2026	1	Demonstration of microtomy (Tissue fixing, Block making, Ribbon cutting).	
	27/08/2026	1	Use of taxonomic keys and field guides (for any two groups of animals).	
September	03/09/2026	1	Handling field instruments (at least four)	
	10/09/2026	1	Field survey methods to be demonstrated in field (Sample Area Count, Line Transects, Quadrant Sampling, Point Count and Random survey).	
	24/09/2026	1	Collection and preservation of specimens/ samples.	
October	01/10/2026	1	Data collection methods – cards/ diary, dictaphone, imagery, and maintenance of Field Diary.	
	08/10/2026	1	Certification of journal/Exam	