

Semester Lecture Plan (Theory)

Name of the college: Government College of Arts, Science and Commerce, Sanquelim							
Name of Faculty: Dr Jyosna Gawas			Subject: Botany				
Paper code: BOT-303			Program/Course: B.Sc.			Division: A	
Academic Year: 2025-2026			Semester: V			Total Lectures: 15	
Course Objectives: To provide students with knowledge on methods and practices of field plant taxonomy and ecology.							
Expected Course Outcome: On completion of the course, students will be able to 1. Recall basics and various key concepts in field botany, methods of in field identification and collection of plant specimens. 2. Explain the collection and preservation procedure for plant, algae, fungi, bryophytes and pteridophytes. 3. Identify the plant based on its field characters. 4. Apply the acquired knowledge for biodiversity estimation, documentation, forestry, ecological studies.							
Student Learning Outcome: After completing this course, students will be able to apply field-botany techniques to collect plants and data from the field and design and execute field experiments							
Month	Lectures		No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
	From:	To:					
June	20/06/2025	21/06/2025	0				
	23/06/2025	28/06/2025	1	Module 1: Concepts in field botany Introduction to field botany: Importance of field botany;			Leaf based identification for Trees of Sahyadri. By S. Inganhalekar
	30/06/2025	5/07/2025	1	field tools and their uses (hand lens, GPS devices, vasculum, plant press); field notes and field voucher number;			

July	7/07/2025	12/07/2025	1	field tools and their uses (hand lens, GPS devices, vasculum, plant press); field notes and field voucher number;			Plant systematics: Theory and Practice by G Singh
	14/07/2025	19/07/2025	1	safety guidelines in fieldwork; ethical considerations in plant collection.			
	21/07/2025	26/07/2025	1	Key concepts for field botany:			
	28/07/2025	2/08/2025	1	Ecological succession			
August	4/08/2025	9/08/2025	1	ISA			Ecology and Environment By P.D. Sharma
	11/08/2025	16/08/2025	1	Role of succession in shaping various terrestrial ecosystems (temperature and moisture shaping ecosystems);			
	18/08/2025	23/08/2025	1	use of keys from flora guide books for plant identification (indented and bracketed key);			
	25/08/2025	30/08/2025	0	Ganesh Chaturthi Break			
September / October	1/09/2025	6/09/2025	1	handy tools for infield plant identification (based on canopy shape, leaf shapes, smell, taste, bark color/texture and patterns, online image search applications) and limitations of using them;			Concepts of Ecology By P. S Verma & V. S. Agarwal
	8/09/2025	13/09/2025	1	Herbarium preparation techniques for various groups of plants; national herbariums.			
	15/09/2025	20/09/2025	1	Field observations: Special ecological groups with two examples each: root parasites, aerial parasites, epiphytes, myco heterotrophs, mangroves, Myristica swamps			
	22/09/2025	27/09/2025	1	Special ecological groups with two examples each: sand dunes, lithophytes, lateritic plateaus, aquatic plants, seaweeds and their adaptations to various environments.			
	29/09/2025	4/10/2025	1	Field experiments: Designing field experiments; data collection and analysis in the field; GIS and its application in field botany.			

October	6/10/2025	11/10/2025	1	Biodiversity assessment: Methods of assessing biodiversity in the field (Shannon index and Simpson's index);			
	13/10/2025	18/10/2025	1	biodiversity conservation strategies; ex-situ (Lead Botanical Garden) and in situ conservation.			

Assessment Rubrics

Component	Max Marks
ISA 1	5
ISA 2	5
ISA 3	NA
Practical	NA
Project	NA
Semester End Exam	20