Practical Plan

Name of the college: Government College of Arts, Science & Commerce, Sanquelim-Goa									
Name of Faculty: Dr Jyosna Gawas			Subject: Botany						
Paper code: BOC110 (Plant Ecology & Phytogeography)			Program: T.Y.B.Sc Batch: I						
Academic year: 2024 - 2025			Semester: VI Total Practicals/Labs: 15	Total Practicals/Labs: 15					
Credits: 02									
Course Objectives	To fomiliarios studente	with various applaciant range	motors montioned in the evillabus						
Course Objectives:	Course Objectives: To familiarise students with various ecological parameters mentioned in the syllabus								
Expected Course Or	itcome: After comple	tion of this course student wil	If he able to discuss, describe and determine various ecological parameters mentioned in the sylla	abus					
Student Learning O	utcome:								
1. Describe the	working of instrument	s used determine ecological f	actors.						
2. Learn various methods to find out pH, conductivity, dissolved O ₂ , carbon content, species diversity.									
 Describe interactions between plants Discuss major phytogeographical zones in India and vagatation types in Goa 									
+. Discuss major phytogeographical zones in mula and vegetation types in Ooa									
Month	Practicals/Labs	No. of Practicals/Labs	List of Experiments	Reference books					
	Scheduled Date	planned							
December 2024	10/12/2024	01	Study of instruments used to measure microclimatic variables; Soil thermometer, maximum	Ecology and					
		-	and minimum thermometer, anemometer, psychrometer/hygrometer, rain gauge and lux meter	Environment by P.D.					
	17/12/2024	01	Determination of water holding capacity in soils of three habitats.	Sharma					
January 2025	07/01/2025	01	Analysis for carbonates, chlorides, nitrates, sulphates, organic matter and base deficiency from						
			two soil samples by rapid field tests.						

	14/01/2025	01	Determination of organic matter of different soil samples by Walkley & Black rapid titration method.	Concepts of Ecology by P. S Verma & V. S
	21/01/2025	02	Determination of soil conductivity.	Agarwal
			Determination of pH of various soil and water samples (pH meter, universal indicator/ lovibond comparator and pH paper).	Practicals in Ecology
	28/01/2025	01	Estimation of dissolved oxygen of water samples from polluted and unpolluted sources.	Sudha Rani Govil
February 2025	04/02/2025	01	Determination of minimal quadrate size for the study of herbaceous vegetation in the college	
			campus, by species area curve method	
	11/02/2025	01	Study of aquatic ecosystem for phytoplanktons and hydrophyte diversity.	
	18/02/2025	01	Quantitative analysis of herbaceous vegetation for frequency, density and abundance in the	
			college campus.	
	25/02/2025	01	Study of morphological and anatomical adaptations of xerophytes.	
March 2025	04/03/2025	01	Study of morphological and anatomical adaptations of hydrophytes.	
	11/03/2025	01	Study of biotic interaction of the following: Stem parasite (<i>Loranthus & Cuscuta</i>), Epiphytes (Orchids), Predation (Insectivorous plants – <i>Utricularia/Drosera</i> /Pitcher plant).	
	18/03/2025	01	To prepare map of India with respect to (i) major climatic zones (ii) biogeographic regions of India	
	25/03/2025	02	To prepare map of India with respect to forest types.	
			To prepare map of Goa to show its vegetation types as specified in theory.	
April 2025	07/04/2025	01	Journal correction and certification	

Assessment Rubrics

Component	Max Marks
ISA 1	NA
ISA 2	NA
Practical	50
Project	NA
Semester End Exam	NA