

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-300			Program/Course: B.Sc.			Division: A	
Academic Year: 2026-2027			Semester: V			Total Lectures: 45	
Course Objectives: 1. Impart knowledge on the use of taxonomic tools in plant identification, nomenclature and major systems of classification. 2. Familiarize students with diagnostic characters of families and identification of some economically important plants belonging to these families. 3. Enable students to understand the concept of origin and evolutionary relationship between plants.							
Expected Course Outcome: On completion of the course, students will be able to - Recall the various terms used in taxonomy and phylogeny of angiosperms. - Explain the taxonomic tools and their use in identifying plants, nomenclature, types of classifications, diagnostic features of families, origin and evolution of angiosperms. - Apply the gained knowledge in herbarium preparation, key construction and phylogenetic trees. - Develop skills in identifying, classifying and describing plants.							
Student Learning Outcome: By the end of the course the students will gain knowledge in taxonomic Identification, Nomenclature Skills and understand Angiosperm Systematics and Evolution							
Month	Lectures		No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
	From:	To:					
June	219/06/2026	20/06/2026	1				Taxonomy of Vascular Plants by G. H. M Lawrence
	22/06/2026	27/06/2026	3	Module 1: Taxonomic tools in identification and nomenclature Herbaria: Herbarium technique; Role of herbaria, virtual herbarium			

June/July	29/06/2026	04/07/2026	3	Important herbaria and botanical gardens (Royal Botanical Garden, Kew and Central National Herbarium, Kolkata).			Plant systematics: Theory and Practice by G Singh Taxonomy of Practical Botany-II by A. M. Bendre & A. Kumar
July	06/07/2026	11/07/2026	3	Taxonomic literature and keys: Flora, monographs, manuals; Single access keys (yoked and bracketed key) and multi-access keys (body punched card).			
	13/07/2026	18/07/2026	3	Botanical nomenclature: Principles and rules of ICN; ranks and names, binominal system,			
	20/07/2026	25/07/2026	3	Typification (holotype and isotype), author citation, valid publication, Rejection of names, principle of priority and its limitations.			
	27/07/2026	01/08/2026	3	Module 2: Classification and systematics of angiosperms Systems of classification: A brief account of natural, artificial and phylogenetic classification; Bentham and Hooker's classification (up to series) and its merits and demerits; ISA I			
August	03/08/2026	08/08/2026	3	Features of Engler and Prantl's classification, A brief account of Angiosperm Phylogeny Group (APG) system.			
	10/08/2026	15/08/2026	2	Systematics of angiosperms: Systematic position (Bentham and Hooker's classification), diagnostic features and any two plants of economic importance of the following families: Annonaceae, Rutaceae,			
	17/08/2026	22/08/2026	3	Leguminosae (Papilionoideae), Rubiaceae, Apocynaceae			
	24/08/2026	29/08/2026	3	Amaranthaceae, Orchidaceae, Musaceae			
August / September	31/08/2026	05/09/2026	3	Arecaceae, Poaceae; ISA II			
September	07/09/2026	12/09/2026	3	Module 3: Origin, evolution and phylogeny of angiosperms Origin and evolution of angiosperms: A general account with special reference to Bennettitalean, Gnetalean,			

	14/09/2026	19/09/2026	0	Ganesh Break			
	21/09/2026	26/09/2026	3	Caytonialean and Herbaceous origin theories; evolution of flower; co- evolution of flowers and insects (morphological features).			
September / October	28/09/2026	03/10/2026	2	Phylogeny of angiosperms: Terms and concepts (primitive and advanced, homology and analogy, parallelism and convergence, monophyly, paraphyly, polyphyly and clades). ISA III			
October	05/10/2026	10/10/2026	3	Methods of illustrating evolutionary relationship (phylogenetic tree and cladogram); significance of phylogeny			
	12/10/2026	14/10/2026	1	Revision			

Assessment Rubrics

Component	Max Marks
ISA 1	7.5
ISA 2	7.5
ISA 3	7.5
Practical	NA
Project	NA
Semester End Exam	60