

Semester Lecture Plan (Theory)

Name of the college: Government College of Arts, Science and Commerce, Sanquelim		
Name of Faculty: Sukhada A. Borker	Subject: Botany	
Paper code: BOT-112	Program/Course: F.Y. B.Sc.	Division: A
Academic Year: 2026-2027	Semester: I	Total Lectures: 15
Course Objectives: This course aims to: • Familiarize students with the importance of plants in daily life, traditional practices, environmental management and sustainable resource utilization using modern plant-based technologies. • Identify economically important plants and their uses in value-added plant products. • Impart hands-on training in plant identification, preparation of herbal and eco-friendly products, extraction techniques, laboratory testing, and field-based study of local plant resources.		
Expected Course Outcome: On completion of the course, students will be able to • CO1: Recall the significance of plants in daily life, environmental management, traditional practices, plant resources, and value- added products. • CO2: Explain plant-based services, morphological features for plant recognition, resource utilization, and preparation of plant-derived products. • CO3: Apply knowledge of plant resources, sustainable cultivation practices, and herbal products for healthy and sustainable living. • CO4: Analyze and evaluate the role of plants in sustainability, healthcare, food security, and value addition for societal well-being.		
Student Learning Outcome: By the end of the course the students will gain • Recognize the importance of plants in everyday life, traditional knowledge, environmental management, and sustainable utilization of plant resources. • Identify common wild, medicinal, and economically important plants based on their morphological characteristics and explain their uses. • Demonstrate practical skills in the preparation of herbal products, extraction techniques, eco-friendly plant-based products, and plant identification using modern tools. • Apply knowledge of hydroponics, aeroponics, phytoremediation, and sustainable agricultural practices to promote environmental conservation and healthy living. • Evaluate the contribution of plant resources to food security, healthcare, industry, and sustainable development through value-added plant products.		

Month	Lectures		No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
	From:	To:					
June – July - August	29/06/2026	04/07/2026	1	Module 1: Plant services in everyday life. Plants and society: Introduction to Botany;		Power point presentation / Chalk Board	Upadhyay, R (2023). Botany for B.Sc. students, Economic Botany, Ethnomedicine and phytochemistry/Commercial Botany and phytochemical Analysis. S. Chand and Company Ltd. Publishers, India.
	06/07/2026	11/07/2026	1	Plant resources, uses and applications in everyday life.			
	13/07/2026	18/07/2026	1	Ethnobotany in local festivals / rituals (any two);			
	20/07/2026	25/07/2026	1	Role of traditional knowledge in conservation.			
	27/07/2026	01/08/2026	1	ISA- 1 (Assignment), Role of plants: Phytoremediation (definition and types: phytoextraction, phytostabilization)			
August	03/08/2026	08/08/2026	1	Role of plants: Phytoremediation (rhizodegradation, phytovolatilization, rhizofiltration);		Power point presentation / Chalk Board	Singh, G. (2021). <i>Plant Systematics: Theory and Practice</i>. 3rd Edition. CRC Press, Boca Raton, Florida, USA.
	10/08/2026	14/08/2026	1	Lichens as pollution indicators.			
	17/08/2026	22/08/2026	1	Plant nutrient cycling – litter decomposition and organic manures.			
	24/08/2026	29/08/2026	1	Basics of plant morphology for identification: Roots (tap, adventitious), Stem (aerial, underground);			
August - September	31/08/2026	05/09/2026	1	Leaf (parts of the leaf; phyllotaxy – alternate, opposite, whorled; types – compound, simple; venation – parallel, reticulate);		Power point presentation	Singh, G. (2021). <i>Plant Systematics: Theory and Practice</i>.

	07/09/2026	12/09/2026	1	Inflorescence (cymose, racemose); whorls of flower;		/ Chalk Board	3rd Edition. CRC Press, Boca Raton, Florida, USA.
	14/09/2026	19/09/2026		Ganesh Chatruthi Break			
	21/09/2026	26/09/2026	1	Fruits (simple, aggregate, multiple).			
September - October	28/09/2026	03/10/2026	1	Modern plant sciences: Definition, technique and applications of hydroponics and aeroponics;		Power point presentation / Chalk Board	Upadhyay, R (2023). Botany for B.Sc. students, Economic Botany, Ethnomedicine and phytochemistry/Commercial Botany and phytochemical Analysis. S. Chand and Company Ltd. Publishers, India.
	05/10/2026	10/10/2026	1	Precision farming – concept and its applications in sustainable food production.			

Assessment Rubrics

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