

Lecture Plan

Name of the college: Government college of arts science and commerce Sanquelim-Goa

Name of Faculty: Anuja Naik

Subject: Botany (nursery and gardening)

Paper code: BOD-105

Program/Course: T.Y B.Sc.

Division: A

Academic year: 2024 - 2025

Semester: VI

Total Lectures: 30

Course Objectives: This course is designed to give detailed knowledge of operation and management of nursery, greenhouse and gardens. The practical component of the course involves hands-on training in designing landscape and garden layouts, vegetative propagation techniques, and routine nursery and garden operations including kitchen gardening.

Course Learning Outcome: Understand the basic concepts of nursery layout and management practices like sowing, planting, potting, vegetative propagation, seed storage and plant protection.
Understand different features of indoor gardening such as vertical garden, bonsai, terrarium and its routine operations.
Develop skills in kitchen gardening for cultivation of different vegetables.
Be able to establish start-ups in gardening/kitchen gardening or work as landscape designers.

Month	Lectures From: To:		No. of lectures allotted	Topic, Subtopic to be covered	Learning outcome	Exercise/ Assignmen t	ICT Tool s	Reference books
December	9-12-24	14-12-24	3	Unit 1: Nursery- Definition, objectives and scope,	Students define and state objectives of the nursery along with the scopes of the nursery.		Pow er point pres entat ion.	Bose, T.K. and Mukherjee, D. 1972. Gardening in India. Oxford & IBH Publishing Co., New Delhi. Sandhu, M.K.
				nursery layout, building up of infrastructure for nursery,	Students are able to draw layout and also able to list out the infrastructure for building nursery.			

				management of nursery - planning and seasonal activities	Students are able to plan and manage the requirement need for good nursery		1989. Plant Propagation. Wiley Eastern Ltd., Bangalore. Agrawal, P.K. 1993. Hand Book of Seed Technology. Department of Agriculture and Cooperation, National Seed Corporation Ltd., New Delhi.
December	16-12-24	21-12-24	3	Planting - direct seeding and transplants, potting seedlings,	Students are able to list out the different potting mix and also understand the technique needed for planting direct seedlings.		
				manuring and irrigation,	Students are able to describe about manuring and irrigation		
				plant protection measures.	Students learn the measures to protect plants		
	23-12-24	23-12-24	0				
January	2-1-25	4-1-25	3	Unit 2: Seed- Structure and types - Seed dormancy,	Students are able to define structure and type of seeds and also able to explain seed dormancy		
				causes and methods of breaking dormancy;	Students are able to explain the causes and methods of breaking seed dormancy		
				Seed storage: Seed banks.	Students learn the methods of seed storage.		

	6-1-25	11-1-25	3	factors affecting seed viability, genetic erosion	Students understands the factors affecting the seed viability and genetic erosion	
				Seed production and processing	Students are able to explain the seed production and processing	
				seed testing and certification	Students define seed testing and certification	
	13-1-25	18-1-25	3	Unit 3: Vegetative propagation- Methods of vegetative propagation - Layering, grafting,	Students learn different methods of vegetative propagation	
				budding, division, offset, suckers,	Students learn different methods of vegetative propagation	
				runners, bulbs, corms, bulbils, cuttings.	Students learn different methods of vegetative propagation	Asked students to carry out grafting techniques in their garden
	20-1-25	25-1-25	3	Hardening of plants.	Students learn the technique of hardening of plants.	
				Green house, mist chamber, shed roof, shade house.	Students are able to explain Green house, mist chamber, shed	

					roof, shade house.	
				ISA I + Green house, mist chamber, shed roof, shade house.	Students are able to explain Green house, mist chamber, shed roof, shade house.	
	27-01-25	31-1-25	3	Unit 4: Gardening- Definition, objectives and scope -	Students define and state the definition, objective and scope of Gardening	
				different types of gardens – landscape, avenue plantation	Students define different type of garden	
				home gardening - parks and its components.	Students define different type of garden and its components	
February	3-2-25	8-2-25	3	plant materials and design	Students are able to list out the plant materials and explain the design.	
				computer applications in landscaping;	Students describe the computer application in landscaping	
				different features of a garden – fencing, steps.	Students describes the different features of gardening.	
	10-2-25	15-2-25	3	drives and paths, hedge, edging, arches.	Students describes the different features of gardening.	
				pergolas, lawns, carpet	Students describes	

				bedding, flower beds.	the different features of gardening.	
				shrubby, borders, topiary, rock garden,	Students describes the different features of gardening.	
	17-2-25	22-2-25	3	water garden, garden adornment	Students describes the different features of gardening.	
				Unit 5: Routine garden operations- Preparation of soil.	Students understands the routine garden operations	
				manuring, watering, pruning, staking, defoliation, pinching etc.,	Students understands the routine garden operations	
	24-2-25	28-2-25	3	management of pests and diseases and harvesting.	Students understands the routine garden operations	
				Unit 6: Indoor gardening- Selection and cultivation of house plants;	Students understands and explain the indoor gardening	
				gardening in tubs or urns, hanging baskets,	Students understands and explain the different concepts of indoor gardening	
March	3-3-25	8-3-25	3	window boxes; gardening in troughs, dishes,	Students understands and explain the different concepts	

					of gardening	
				bowls and trays; vertical garden;	Students understands and explain the different concepts of gardening	
				jar, bottle and terrarium gardening; bonsai.	Students understands and explain the different concepts of gardening	
	10-3-25	15-3-25	3	Unit 7: Kitchen garden- Kitchen garden layout; classification of vegetables.	Students are able to draw the kitchen garden layout	
				vegetables in different seasons;	Students learn different types of vegetables grown in different seasons	Asked students to grow different types of vegetables at their home backyard
	17-3-25	22-3-25	3	ISA II	ISA II	
				organic manures and substrates.	Students describe the organic manure and substrate.	
				preparation of beds; sowing/raising of seeds and seedlings;	Students learn to prepare bed for sowing and raising of seeds and seedlings.	
	24-3-25	29-3-25	2	transplanting of seedlings;	Students understand the process of	

					transplanting of seedlings.		
				study of cultivation of different vegetables: local leafy vegetables red amaranth and spinach, chillies, cluster beans, cabbage,	Students study the methods of cultivation of local vegetables		
April	1-4-25	5-4-25	2	brinjal, lady's finger, onion, turmeric, ginger, knol khol.	Students study the methods of cultivation of local vegetables		
				sweet potatoes, cucurbits, tomatoes and carrots.	Students study the methods of cultivation of local vegetables		
	7-4-25	11-4-25	3	storage and marketing procedures.	Students describe and state the storage and marketing procedure.		
				Revision	Revision		
				Revision	Revision		