GANPAT UNIVERSITY									
FACULTY OF AGRICULTURE, ALLIED SCIENCES & TECHNOLOGY									
Programme	B.Sc. (Hons)					Branch/Spec.	Agriculture		
Semester	III					Version	1.1.1.0		
Effective from Academic Year			2026-27			Effective for the batch Admitted in			July 2025
Subject code	IIIA04PTF		Subject Name			Production Technology of Fruit and Plantation Crops			
Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture (DT)		Practical (Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	1	0	1	-	2	Theory	40	40	80
Hours	1	0	2	-	3	Practical	20	0	20

Pre-requisites

Not Applicable

Course Outcomes

On successful completion of the course, the students will be able to:

CO1	To know the importance of different fruit crops and plantation crops.
CO2	To learn about basic concepts and fundamentals aspects of production technology of fruit crops.
CO3	Students will be able to accurately describe a wide range of plantation crops.
CO4	Imparting practical experience on nursery layout, care and maintenance, PGR, Pest and disease of different fruit and plantation crops.

Theory Syllabus

Unit	Content	Hrs
1	Production status of fruit and plantation crops: Importance and scope of fruit and plantation crop industry in India; nutritional value of fruit crops; classification of fruit crops; area, production, productivity and export potential of fruit and plantation crops.	3
2	Crop production techniques in tropical, sub-tropical and temperate fruit crops: Climate and soil requirements, varieties, propagation and use of rootstocks, planting density and systems of planting: High density and ultra-high density planting, cropping systems, after care – training and pruning; water, nutrient and weed management, fertigation, special horticultural techniques, plant growth regulation, important disorders, maturity indices and harvest, value addition. Fruit crops: mango, banana, papaya, guava, sapota, citrus, grape, litchi, pineapple, pomegranate, apple, pear, peach, strawberry, nut crops Jackfruit and	4
3	Crop production techniques in tropical, sub-tropical and temperate fruit crops: Climate and soil requirements, varieties, propagation and use of rootstocks, planting density and systems of planting: High density and ultra-high density planting, cropping systems, after care – training and pruning; water, nutrient and weed management, fertigation, special horticultural techniques, plant growth regulation, important disorders, maturity indices and harvest, value addition. Minor fruits- date, ber, apple, plantation crops-coconut, arecanut, cashew, tea, coffee and rubber.	4
4	Crop production techniques in palms and plantation crops: Climate and soil requirements, varieties, propagation, nursery management, planting and planting systems, cropping systems, after care, training and pruning for plantation crops, water, nutrient and weed management, intercropping, multi-tier cropping system, mulching, special horticultural practices, maturity indices, harvest and yield, pests and diseases, processing- value addition Palms: Coconut, Arecanut, Oil palm and Palmyrah, Plantation crops: Tea, Coffee, Cocoa, Cashewnut, Rubber.	4

Practical Content-

1. Propagation techniques, selection of planting material, varieties, important cultural practices for mango, banana, papaya, guava, sapota, grapes, Citrus (mandarin and acid lime), pomegranate, jackfruit
2. Preparation and application of PGR's for propagation,
3. Micro propagation, protocol for mass multiplication and hardening of fruit crops
4. Identification and description of varieties, mother palm and seed nut selection,

Note: Version 1.0.0.0 (First Digit= New syllabus/Revision in Full Syllabus, Second Digit=Revision in Teaching Scheme, Third Digit=Revision in Exam Scheme, Forth Digit= Content Revision)

L=Lecture, TU=Tutorial, P= Practical/Lab., TW= Term work, DT= Direct Teaching, Lab.= Laboratory work

CE= Continuous Evaluation, SEE= Semester End Examination

5. Nursery practices, seedling selection,
6. Fertilizers application,
7. Nutritional disorders, pests and diseases of Coconut, Arecanut and cocoa, Tea and coffee, Rubber and cashew
8. Visit to commercial orchard and plantation industries.

Reference book

1. Banday, F.A. and Sharma, M.K.2010 Advances in temperate fruit production. Kalyani Publishers, Ludhiana
2. Bose, T.K., S.K. Mitra and D. Sanyal 2001. Fruits: Tropical and Subtropical (2 volumes) Naya Udyog, Calcutta.
3. Bose, T.K., S.K. Mitra, A.A. Farooqi and M.K. Sadhu (Eds). 1999. Tropical Horticulture Vol.1. Naya Prokash, Calcutta.
4. Chadha, K.L. 2001. Handbook of Horticulture. ICAR, Delhi
5. Chadha, T.R. 2001 Textbook of temperate fruits. ICAR, New Delhi
6. Chattopadhyay, T.K. 2001. A Text Book on Pomology (4 volumes). Kalyani Publishers, Ludhiana.
7. Chattopadhyay. 1998. A textbook on pomology (sub-tropical fruits) vol.III. Published by M/s. Kalyani publishers, Ludhiana, New Delhi, Noida. UP.
8. Chudawat, B. S.1990. Arid fruit culture Oxford &IBH, New Delhi

Mapping of CO with PO and PSO:

	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	1	1	2	2	1	1	3	2	2	1	1	1
CO2	2	1	2	1	1	1	2	2	1	1	2	1
CO3	2	1	2	1	2	1	3	3	2	1	2	1
CO4	2	1	2	1	2	1	3	2	2	1	1	1
CO5	3	1	3	2	2	1	2	3	2	1	2	1

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