21HORT181 FUNDAMENTALS OF HORTICULTURE

Hours Per Week :

L	T	P	C
1	-	2	2

Total Hours :

L	T	P
15	-	30

Source :

https://images.app.goo.gl/AZjiojzjtgbYtws78

COURSE DESCRIPTION AND OBJECTIVES:

This course introduces students to the importance and branches of Horticulture and provides practical ideas in laying out and management of orchards and in sexual and asexual propagation techniques

COURSE OUTCOMES:

Upon completion of the course, the student will be able to achieve the following outcomes:

COs	Course Outcomes
1	Understand and acquire skills in various propagation techniques and develop package of practices for different Horticultural crops
2	Learn basic Biology, Taxonomy and Morphology of Horticultural crops

SKILLS:

- ✓ *Designing planting system for various Horticultural crops*
- ✓ *Expertise in pruning, grafting, harvesting practices*
- ✓ *Multiplication of Horticultural crop seedlings by using various propagation techniques*

ACTIVITIES:

- *Visit to Horticultural gardens and nurseries*
- *Involved in planting, grafting and pruning techniques of Horticultural crops*

UNIT - 1

Introduction: Horticulture - Its definition and branches, Importance and scope of Horticulture, Horticultural and botanical classification, Climate and soil for horticultural crops

UNIT - 2

Plant Propagation: Plant propagation -methods (sexual & asexual), propagating structures; separation, division, grafting, budding, layering), High density planting; Use of rootstocks

UNIT - 3

Orchard Establishment: Orchard establishment (Principles & Layout); Principles and methods of training and pruning, Juvenility and flower bud differentiation

UNIT - 4

Orchard Establishment: Unfruitfulness; pollination, pollinizers and pollinators; fertilization and parthenocarpy; Vegetable gardens & ornamental garden types and parts

UNIT - 5

Lawn Making: Lawn making, Use of plant bio-regulators in horticulture, Irrigation methods in horticulture crops, Fertilizers application - methods

LABORATORY EXPERIMENTS

LIST OF EXPERIMENTS

1. Identification of garden tools
2. Identification of horticultural crops
3. Layout of different planting systems
4. Layout of kitchen garden
5. Preparation of nursery bed (raised and flat beds) and sowing of seeds
6. Practice of different asexual methods by divisions
7. Practice of different asexual methods by cuttings
8. Practice of different asexual methods by grafting
9. Practice of different asexual methods by budding
10. Practice of different asexual methods by layering
11. Training and pruning of fruit trees
12. Transplanting and care of vegetable seedlings
13. Making of herbaceous and shrubbery borders
14. Preparation of potting mixture, potting and repotting
15. Fertilizer application in different crops.
16. Fertilizer application in different crops and visits to commercial nurseries / orchard

REFERENCES:

1. Chadha, K.L. 2001. *Handbook of Horticulture.* ICAR, New Delhi
2. Jitendra Singh, 2012. *Basic Horticulture.* Kalyani Publishers. New Delhi. Tamilnadu

TEXT BOOKS:

1. Chadha, K.L. 2001. *Handbook of Horticulture.* ICAR, New Delhi.
2. Jitendra Singh, 2012. *Basic Horticulture.* Kalyani Publishers. New Delhi. Tamilnadu.

REFERENCES:

1. Randhawa, G.S. and Mukhopadhyaya, A. 1994. *Floriculture in India*. Allied PublishersPvt. Ltd., New Delhi
2. Kumar, N. 1997. *Introduction to Horticulture*. Rajyalakshmi Publications, Nagorcoil,
3. Randhawa, G.S. and Mukhopadhyaya, A. 1994. *Floriculture in India*. Allied Publishers Pvt Ltd., New Delhi
4. Kumar, N. 1997. *Introduction to Horticulture*. Rajyalakshmi Publications, Nagorcoil