

Horticulture

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution Of The Course			Eligibility Criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Horticulture	2	0	0	2	Class XII	NIL

Learning objectives

- To acquaint students with the basic, principles, concepts and importance of Horticulture
- To train students in lawn designing, species selection for lawns, parks, home gardens and terrace gardens.
- To provide information about the employment and business opportunities and other avenues in the horticulture sector

Learning Outcomes

After completion of the course, learners will be able to:

- design gardens and learn the art of landscape design.
- describe and implement methods of preparing soil, cultivation and propagation for growing hedges, climbers, vegetables, and fruit yielding plants
- create and maintain nurseries, green houses and implement innovative practices in maintenance, harvesting and storage of horticultural produce.
- apply the skills for enhancing the job opportunities (Horticulturist) as well as self-employment.

Syllabus

Practical: 60 hours

1. Introduction to Horticulture; Garden tools and safety. 4 hours
2. Lawn making and lawn care: recognizing soils and drainage systems, types of grasses. 4 hours
3. Choosing the appropriate plants (species selection) for plantation in different seasons and locations (Outdoor, roof-top, balcony, rock gardens); Flowering annuals, herbaceous

- perennials, vines and climbers, ornamental trees, bulbous and foliage plants, cacti and succulents. 4 hours
4. Vegetable Garden: Sowing, raising seedlings, transplantation methods; choosing the right vegetables for the season. 4 hours
 5. Seed germination, viability tests and comparison of other parameters of seeds (stored from different years/different temperatures). 4 hours
 6. Weeding, manuring, and irrigation methods used in lawns, parks, and vegetable gardens. 4 hours
 7. Propagation and plant care: propagation by layering, cutting and other methods. 4 hours
 8. Pruning: pruning roses, shrubs, and trees. 4 hours
 9. Supporting plants: bamboos, strings, and enclosures. 4 hours
 10. Maintenance and care of lawns and gardens: understanding diseases caused by pests and pathogens; protecting garden plants from infections, treating the plants with organic and biopesticides. 4 hours
 11. Bonsais: Art and craft. 4 hours
 12. One week internship on field or in a company/organisation (Landscape Design) that shall be facilitated by the college and report to be submitted. 8 hours
 13. Methods and plantation approaches in various garden designs: Japanese, Mughal, Buddhist, English and Indian Gardens. 4 hours
 14. Enhancing beauty of a garden using flowering plants, Garden walls, Fencing, Steps, Hedge, Edging, Lawn, Flower beds, Borders, aquatic garden with flowers; Case studies: Some selected gardens of India. 4 hours

Essential Readings:

1. Edmondson, J.L., Cunningham, H., Densley Tingley, D.O. et al. (2020). The hidden potential of urban horticulture. *Nat Food* **1**, 155–159.
2. Musser E., Andres. (2005). *Fundamentals of Horticulture*. New Delhi, Delhi: McGraw Hill Book Co. 2.
3. Sandhu, M.K. (1989). *Plant Propagation*. Madras, Bangalore: Wile Eastern Ltd.
4. Bird, C. (Ed.). (2014). *The fundamentals of horticulture: Theory and practice*. Cambridge University Press.
5. *The Practical Gardener* (1994). Reader's Digest Special Volume.

Examination scheme and mode:

Evaluation scheme and mode will be as per the guidelines notified by the University of Delhi.