INTEGRAL UNIVERSITY
LUCKNOW - INDIA

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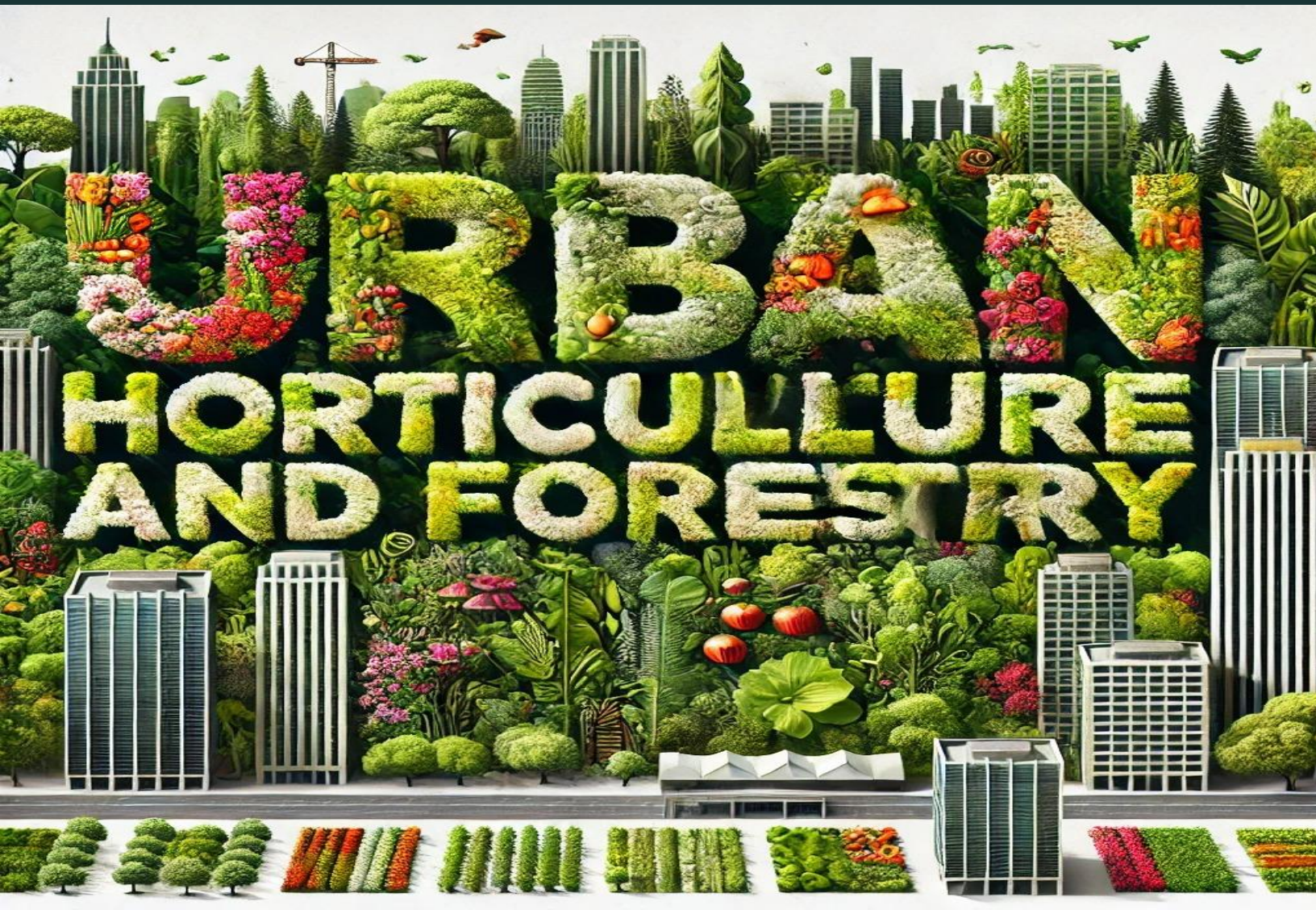
CELEBRATING 25 YEARS OF EXCELLENCE



Urban Horticulture and Forestry

AGV-01-2425

ORGANIZED

BY

DEPARTMENT OF AGRICULTURE
INTEGRAL INSTITUTE OF AGRICULTURAL SCIENCE & TECHNOLOGY (IIAST)

25th AUG – 8th SEP, 2024

Dear All,

We are pleased to announce that the Department of Agriculture (IIAST), Integral University, Lucknow is going to offer a Value-Added Course (VAC) on "Urban Horticulture and Forestry" from 25th August 2024 for the students of all courses

DESIGNING OF LANDSCAPE IN GARDENS

Urban horticulture and forestry are interdisciplinary fields that focus on the integration and management of plant life in urban environments to enhance ecological, social, and economic well-being. Urban horticulture involves the cultivation of plants, including vegetables, fruits, and ornamental species, in various urban settings such as community gardens, green roofs, and urban farms, promoting local food production, biodiversity, and aesthetic enhancement. Urban forestry, on the other hand, deals with the care and management of tree populations in urban areas, aiming to improve air quality, provide shade, mitigate the urban heat island effect, and contribute to the overall health and sustainability of urban ecosystems. It offers numerous advantages for students, providing a multidisciplinary learning experience that combines biology, environmental science, urban planning, and social engagement. Engaging in these fields equips students with practical skills in plant cultivation, landscape design, and ecosystem management, fostering a deep understanding of sustainable practices and environmental stewardship. Students gain hands-on experience through community gardens, urban farms, and tree planting initiatives, enhancing their knowledge of biodiversity, climate resilience, and green infrastructure. Moreover, these activities promote physical well-being, teamwork, and community involvement, preparing students for careers in environmental science, urban planning, horticulture, and related fields, while instilling a sense of responsibility towards creating sustainable urban environments.

Objectives

- To understand the evolution and significance of urban horticulture and forestry through diverse green spaces and historical examples.
- To explore advanced technologies and biotechnological methods for efficient horticultural crop production and management.
- To learn about precision farming, sustainable practices, and the application of robotics and drones in horticulture.
- To familiarize the students with landscape design principles, including specialized gardens and recycled water use.
- To develop effective management strategies for urban forests to boost ecological, social, and economic benefits.

Learning Outcomes

Students will understand

- Evolution and importance of urban horticulture and forestry through diverse green spaces and historical examples.
- Advanced technologies and biotechnological methods for efficient horticultural crop production and management.
- Components of precision farming, sustainable practices, and the use of robotics and drones in horticulture.
- Principles of landscape design, including specialized gardens and the use of recycled water.
- Strategies for effectively managing urban forests to enhance ecological, social, and economic benefits.

Course Platform	ILI (Integral Learning Initiative: A Collaborative Blended Learning Platform)/Goggle Meet
Course Duration	30+ Hrs. (2 hours per day excluding Quiz)
Course Start Date	25th August, 2024
Course End Date	08th September, 2024
Registration Date	13st August, 2024
Target Participants:	All Courses

OUTLINE OF VALUE ADD COURSE

Module 1 (6+1 hrs.)

Overview of urban horticulture and urban forestry, Importance of green spaces in urban planning, Evolution of urban green spaces, Case studies from ancient to modern cities.

Types of Urban Green Spaces: Public Parks and Gardens, Street Trees and Urban Woodlands, Rooftop and Vertical Gardens and Community Gardens.

Quiz Test

Module 2 (6+1 hrs.)

Types of protected structure - Classification and types of protected structures, hydroponics and aeroponics; Soil and soilless media for bed preparation.

Micro irrigation systems and their components, fertigation, hi-tech nursery production, problems of growing horticulture crops in protected structures and their remedies, Biotechnological Approaches of horticultural crops and micropropagation.

Quiz Test

Module 3 (6+1 hrs.)

Components of precision farming: Remote sensing, Geographical Information System (GIS), Differential Geo-positioning System (DGPS), Variable Rate applicator (VRA) and Effective Microorganism Technology (EMT).

Mulching, Site Specific Nutrient Management (SSNM), Integrated Plant Nutrient Management (IPNI). Nanotechnology in Horticulture. Use of drones and robotics in Horticulture.

Quiz Test

Module 4 (6+1 hrs.)

Elements and principles of landscape design, Organization of spaces, visual aspects of plan arrangement- view, vista and axis, Principles of circulation, site analysis and landscape, water requirement, use of recycled water, Landscaping for different situations.

Specialized garden types, Vertical gardens, Selection, establishment and maintenance of grass species and other plant materials for special use areas.

Quiz Test

Module 5 (6+1 hrs.)

The concept and scope of urban forestry use and management of urban forests. Importance of urban forestry, Nagar Van Yojna, Urban green structures, Environmental, and sociocultural benefits and services urban forests can provide, MPTs.

Urban forest resource, Impacts on wildlife, Impact of Climate Change, Green roofs, Urban Issues and Potential benefits of urban. Landscape restoration.

Quiz Test

Total duration of course **30+ Hours**

TEAM VAC, DEPARTMENT OF AGRICULTURE

Dr. Ayush Bhushan	**Module 1**
Dr. Sanket Kumar & Dr. Sampurna Nand Singh	**Module 2**
Dr. Sampurna Nand Singh	**Module 3**
Dr. Sanket Kumar	**Module 4**
Dr. Ayush Bhushan	**Module 5**

*** Time: Everyday, 5:00 PM Onwards**

CONVENER

Prof. SABA SIDDIQUI

HEAD

DEPARTMENT OF AGRICULTURE (IIAST)

Integral University, Lucknow

*E-certificate will be issued to participants having 75% attendance and 50% marks in Quiz & Assignment

*Joining link will be shared on the registered email ID one day before the commencement of the course

MODE ONLINE

Course Coordinator

Dr. AYUSH BHUSHAN

Phone No. 7983897352, Email: bayush@iul.ac.in

Dr. SANKET KUMAR

Phone No. 9454839127 Email: sanket@iul.ac.in

Dr. SAMPURNA NAND SINGH

Phone No. 8756514442, Email: sampurna@iul.ac.in

Registration Form Link : https://forms.gle/1N63a4hJVE7ftxVq8

SCAN THIS QR CODE FOR REGISTRATION

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