

A Brief Report on Value Added Course on
“URBAN HORTICULTURE AND FORESTRY”
Course Code: AGV- 01-2425
(25th AUGUST – 08th SEPTEMBER)
Organized by Department of Agriculture,
Integral Institute of Agricultural Science and Technology (IIAST)
Integral University, Lucknow

Urban horticulture and forestry are interdisciplinary fields focused on integrating and managing plant life within urban environments to enhance ecological, social, and economic well-being. Urban horticulture involves cultivating various plants including vegetables, fruits, and ornamental species in urban settings like community gardens, green roofs, and urban farms, promoting local food production, biodiversity, and aesthetic enhancement. Urban forestry, on the other hand, manages urban tree populations to improve air quality, provide shade, mitigate urban heat, and support sustainable ecosystems. These fields equip students with practical skills in plant cultivation, landscape design, and ecosystem management, fostering a strong commitment to sustainable practices and environmental stewardship. Through hands-on activities, students gain experience in biodiversity conservation, climate resilience, and green infrastructure, all while developing teamwork and community engagement skills.

Integral Institute of Agricultural Science and Technology (IIAST) took proactive steps by organizing a comprehensive virtual value-added course on "Urban Horticulture and Forestry." The course, conducted from 25th August to 08th September 2024, spanned over 30 hours and was thoughtfully designed by expert instructors. The initiative reflects the commitment of IIAST to provide knowledge and skills that align with contemporary needs and opportunities in the field of Urban Horticulture and Forestry. This course was specially designed for all the UG, PG and Ph.D. course students of any department throughout the university. A total of 199 students were registered and 182 students passed in the course based on quiz and attendance. This was a virtual mode course conducted and lectures were delivered daily between 7:00-9:00 PM including Quiz.

The Value-Added Course was conducted under the guidance of Dr. Saba Siddiqui, Head, Department of Agriculture, Integral University and was coordinated and facilitated by the following faculty members.

1. Dr. AYUSH BHUSHAN
2. Dr. SANKET KUMAR
3. Dr. SAMPOORNA NAND

The Course modules were addressed by the following resource persons:

S.No.	Date	Course	Module	Outcome
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	From	To	Instructor		
1.	25/08/2024	27/08/2024	Dr. Ayush Bhushan	<p>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.</p> <p>Quiz Test</p>	Students gained foundational knowledge of urban horticulture and forestry.
2.	28/08/2024	30/08/2024	Dr. Sanket Kumar & Dr. Sampurna Nand Singh	<p>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 micro propagation.</p> <p>Quiz Test</p>	Students learned advanced horticulture techniques, including vertical farming and aeroponics.
3.	31/08/2024	02/09/2024	Dr. Sampurna Nand Singh	<p>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.</p>	Students understood the applications of technology in horticulture, including drone and robotics use.

				Quiz Test	
4.	03/09/2024	05/09/2024	Dr. Sanket Kumar	<p>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.</p> <p>Quiz Test</p>	Students learned landscape design principles and specialized garden planning.
5.	06/09/2024	08/09/2024	Dr. Ayush Bhushan	<p>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.</p> <p>Quiz Test</p>	Students gained insights into urban forestry's potential and societal benefits..

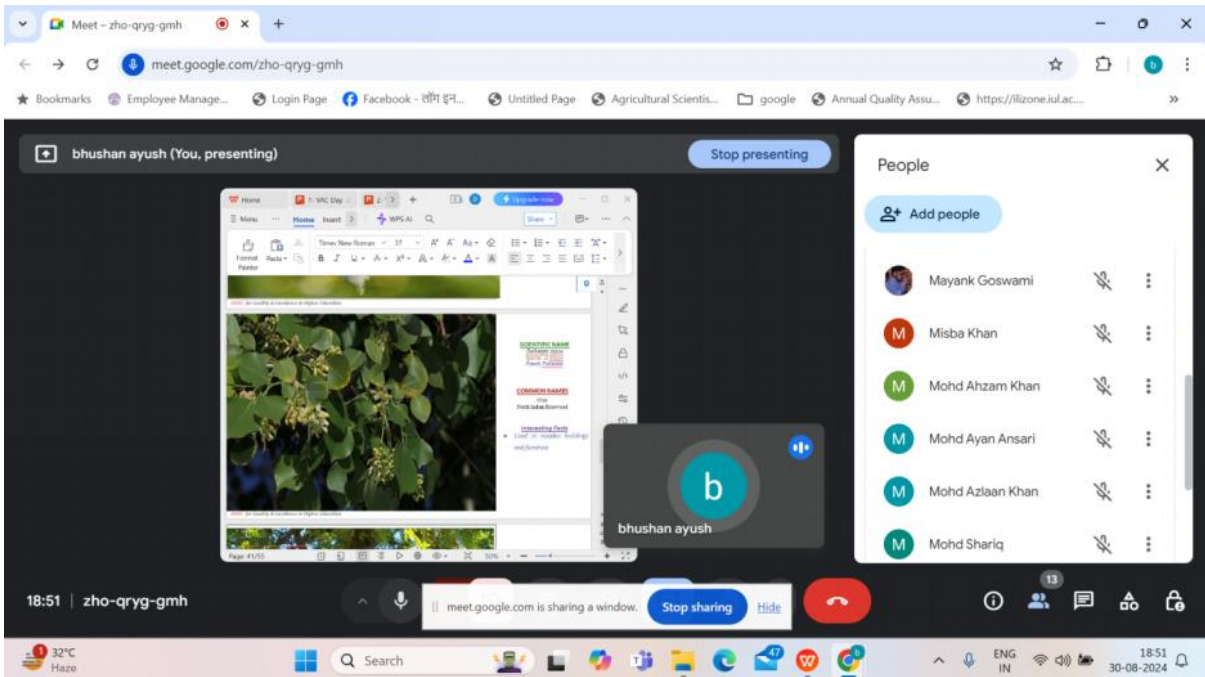
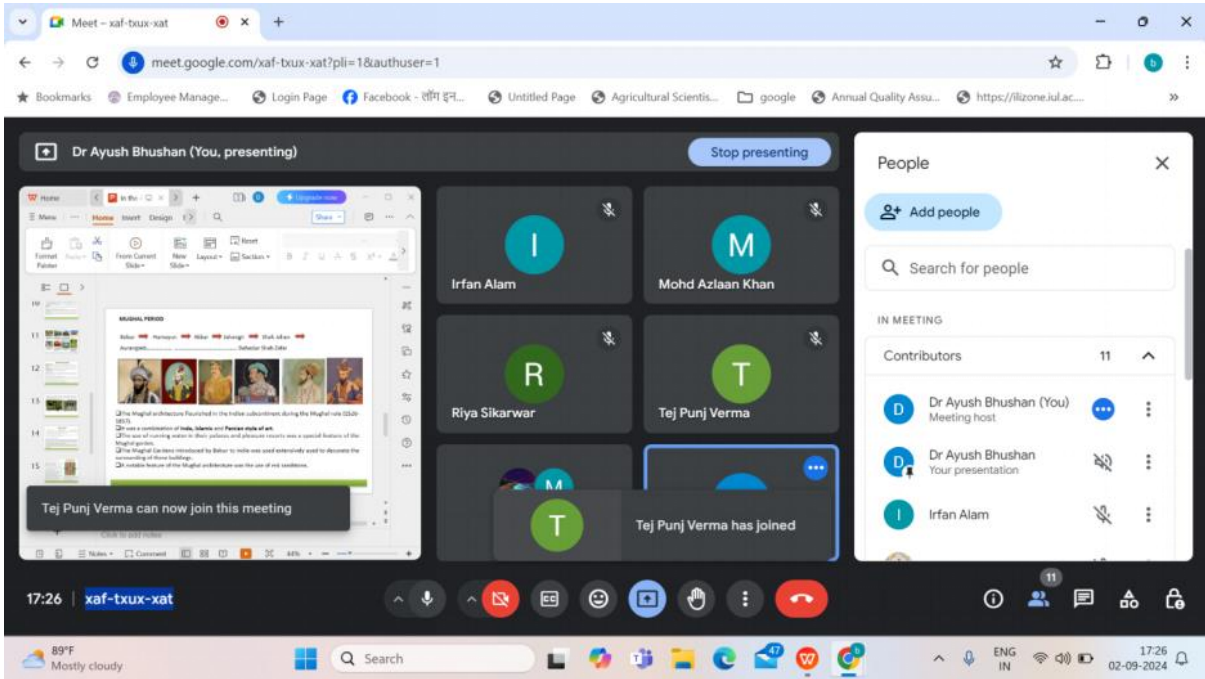
Number of students registered

Number of students registered	No of students attained certificate	Percentage engagement
199	182	91.4 %

All the participants who successfully completed the course were awarded e-certificates on the basis of their quiz test, feedback for every unit, attendance, general feedback, and moreover

50% qualifying criteria for the course. This value-added course equipped participants with an in-depth understanding of urban horticulture and forestry and showcased the potential for green technology in fostering sustainable urban environments.

Glimpse of VAC:



Sample Certificate:



**INTEGRAL
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LUCKNOW - INDIA



INSPIRING EXCELLENCE

INTEGRAL INSTITUTE OF AGRICULTURAL SCIENCE AND TECHNOLOGY (IIAST),
INTEGRAL UNIVERSITY, LUCKNOW

CERTIFICATE OF COMPLETION

This is to certify that

Irfan Alam

Enrolment No.: 2300105088

has successfully completed Value Added Course on

"Urban Horticulture and Forestry"

offered by

Department of Agriculture

from 25th August, 2024 to 8th September, 2024



Dr. Ayush Bhusan
Course Coordinator



Dr. Sanket Kumar
Course Coordinator



Dr. Sampurna Nand Singh
Course Coordinator



Prof. Saba Siddiqui
Head,
Department of Agriculture,
IIAST