J.S. University, Shikohabad

Established by UP Govt. Act No. 07 of 2015 Recognized by U.G.C. under section 2 (f) of Act-1956



VALUE ADDED COURSE

<u>Urban Forestry and Tree Management:</u> <u>Enhancing Green Infrastructure in Cities</u>

Faculty of Agricultural Sciences



J.S. University, Shikohabad Faculty of Agricultural Sciences

Value Added Course

AGVAC-21

<u>Urban Forestry and Tree Management:</u> <u>Enhancing Green Infrastructure in Cities</u>

Learning Objectives:

This course focuses on the management of urban forests and the role of trees in creating a sustainable and healthy urban environment. The course will cover topics such as tree biology and physiology, tree planting and maintenance, tree pest and disease management, and the benefits of urban forests. Additionally, the course will cover strategies for creating and maintaining urban forests, community engagement, and sustainable management practices. By the end of the course, students will have the skills and knowledge needed to enhance green infrastructure in urban areas.

Course Outcomes:

Upon completion of this course, students will be able to:

- 1. Understand the principles and techniques of urban forestry and tree management.
- 2. Select appropriate trees for urban environments and understand best practices for planting and maintenance.
- 3. Monitor tree health and manage pests and diseases using sustainable and effective methods.
- **4.** Apply knowledge and skills gained in the course to implement and manage sustainable urban forestry projects.
- **5.** Engage with communities to promote awareness of urban forestry and encourage community-led projects.



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Duration: 8-10 weeks (depending on the pace of the student)

Intake: 60 students

Course Modules (Syllabus):

Module-1

Introduction to Urban Forestry and Tree Management

- Overview of urban forestry and its role in green infrastructure
- Tree identification and biology
- Benefits of urban forests
- Urban forestry policy and regulation

Module-2

Tree Planting and Maintenance

- Site selection and preparation
- Tree selection and planting techniques
- Pruning and training trees
- Tree health assessment and monitoring

Module-3

Tree Pest and Disease Management

- Common tree pests and diseases
- Integrated pest management techniques
- Tree injection and trunk injection
- Biological control methods

Module-4

Sustainable Urban Forestry Management

• Soil management and health



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AY:

- Water management techniques
- Climate change adaptation strategies
- Urban forestry in the context of green infrastructure

Module-5

Community Engagement and Outreach

- Strategies for community engagement
- Educational outreach programs
- Community-led tree planting and maintenance projects
- Engaging diverse communities in urban forestry

Assessment:

- Weekly quizzes and assignments
- Final project on designing and implementing a sustainable urban forestry plan.

Reference books:-

- 1) "The Urban Tree Book: An Uncommon Field Guide for City and Town" by Arthur Plotnik
- 2) "Urban Forestry: Planning and Managing Urban Green Spaces" by Robert W. Miller and Richard W. Hauer
- 3) "Tree Cities: Inspiring Stories and Practical Advice for Urban Planting" by Jill Jonnes
- 4) "The Management of Trees in Urban Areas" by Mark Johnston and Mark R. Miller
- 5) ."Tree Maintenance" by Michael A. Dirr and Carl E. Whitcomb

ame of Faculty)

Course Coordinator

(Name of Faculty)

Director General Dr. Gaire Yadav