

K. T. S. P. Mandal's

Sahebraoji Buttepatil Mahavidyalaya, Rajgurunagar.

Department of Botany

Teaching Plan (A.Y.2024–2025)

F.Y. B. Sc Botany (semester -1) NEP 2020

Course Title: Course Code - BOT-101-T -Applied Aspects of Plant Sciences

Sr. No	Month	Topics	Teacher
1	July 2024	Introduction to Applied Plant Sciences 1.1. Overview of key concepts and principles 1.2. Importance of applied plant sciences in addressing global challenges. Plant Biotechnology 2.1. Genetic engineering techniques in crop improvement. 2.2. Plant Tissue Culture for improvement of crop productivity. 2.3. Biopharmaceuticals and plant-derived drugs. 2.4. Applications of biotechnology in plant breeding and biotic/abiotic stress tolerance. Precision Agriculture 3.1. Remote sensing and GIS applications in agriculture. 3.2. Use of drones and sensors for crop monitoring and management.	JRK
2	Aug 2024	Sustainable Agriculture Practices 4.1. Organic farming methods and principles. 4.2. Integrated pest management strategies. Plant-Microbe Interactions 5.1. Role of plant-associated microbes in plant health and productivity. 5.2. Applications of beneficial microbes in agriculture. CREDIT-II Climate Change and Plant Sciences 6.1. Impact of climate change on plant growth and agriculture. 6.2. Strategies for mitigating climate change effects through plant science interventions.	JRK
3	Sept 2024	Urban Agriculture and Vertical Farming 7.1. Challenges and opportunities in urban agriculture. 7.2. Vertical farming technologies and their applications. 7.3. Ornamental plant cultivation. 7.4. Urban gardening and landscaping. Plant Health and Disease Management 8.1. Diagnosis and management of plant diseases. 8.2. Emerging technologies for disease detection and control.	JRK

		Postharvest Technology 4.1. Techniques for prolonging shelf life and maintaining quality of harvested produce. 4.2. Importance of postharvest management in reducing food loss and waste.	
4	Oct 2024	Environmental applications 10.1. Plant ecology and conservation 10.2. Ecological restoration techniques 10.3. Phytoremediation and air purification. Revision and Question Paper Discussion	JRK



Subject Teacher



Head of Department

Head

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Sahebraoji Buttepatil Mahavidyalaya
Rajgurunagar, Pune. 410 505.