

# **SHIVAJI UNIVERSITY, KOLHAPUR**

## **CENTRE FOR COMMUNITY DEVELOPMENT**

### **CERTIFICATE COURSE IN ORGANIC URBAN FARMING**

**Course Format:** Theory and Practical (Hands-on training)

**Credits:** 4 credits (60 hours of teaching, project and practical's)

**Duration** Six Months ( Two days per week)

**Qualification:** 10<sup>th</sup> Pass, Beginners, gardening enthusiasts, urban dwellers,  
Students & professionals interested in sustainable food production

**Medium of Instruction:** English/ Marathi

**Fess per participant:** Rs.3000/- tuition fee + 250 evaluation fee + 2000 practical fee

**Batch:** 20 students per batch

**Required staff:** Knowledge and experience of organic farming/ vegetable gardening of at least 10 years + graduate of any subject with ten years of teaching experience in any field

**Required Facilities:** 1. Classroom to accommodate at least 20 Students  
2. Existing organic farm/ vegetable garden of at least 1500 sq.Ft.

**Job Opportunities:** 1.Set up own organic farming units  
2. Provide consultancy to farmers, urban dwellers and bigger organic production units  
3.Set up food preservation, vegetable dehydration units

**Evaluation Pattern:**

**Theory paper1:** 100 marks

**Practical paper 1:** 100 marks

**Class performance,** 50 marks

**Attendance Field visits etc.**

**Project file:** 50 marks

**Practical's:** 12 practical's on 4 Units

**Course objectives**

1. Under stand principles of urban farming, including selecting suitable growing spaces, maximizing limited space efficiently, and adapting newer techniques.
2. Learn how to choose the right plants for urban farming, including vegetables, herbs and flowers. Also explore essential plant care practices.
3. Discover eco-friendly techniques for composting, water conservation, and recycling to minimize environmental impact and promote sustainability in urban gardens.
4. Gain practical skills and hands on experience through demonstrations, case studies, and interactive activities.
5. Apply learned concepts to design and implement your own urban garden project, from planning and planting to maintenance and harvest, and gain confidence.

## **SYLLABUS**

### **Unit 1: (15 Lectures + Practical's )**

#### **Introduction to Organic Urban Vegetable Farming**

**What is Organic farming?**

**Importance of urban farming in food security,**

**Benefits: environmental, health, and economic advantages,**

**Overview of urban farming techniques (rooftop, balcony, indoor, and community gardens)**

**Practical: Site selection and assessment for urban farming**

#### **Understanding Soil and Growing Media**

**Soil composition and types, Improving soil fertility in limited space, Alternative growing media: coco peat, compost, hydroponics.**

**Practical: Soil preparation and testing for nutrient content**

#### **Composting and Waste Management**

**Composting techniques for small spaces, Vermicomposting and bokashi composting methods, Recycling kitchen waste for soil enrichment**

**Practical: Setting up a composting system**

### **Unit 2: (15 Lectures + Practical's )**

#### **Container and Raised Bed farming**

**Choosing containers for different crops, Raised bed construction for efficient space use, Maintenance and watering techniques for container gardening**

**Practical: Setting up containers and raised beds**

#### **Selecting Vegetables for Urban Gardens**

**Choosing suitable crops for small spaces, Seasonal vegetable planning, Companion planting and crop rotation strategies**

**Practical: Planning and designing a small vegetable garden.**

#### **Cultivation of Fruits**

**Soil preparation and site selection, selection of fruit crop varieties, propagation techniques (grafting, budding, layering), water management (drip, rainwater etc.,) growth stages and care, harvesting.**

**Practical: Planning and designing a small fruit garden.**

### **Unit 3: (15 Lectures + Practical's )**

#### **Vertical Gardening and Hydroponics**

**Space-saving techniques: trellises, wall planters, and hanging gardens, Introduction to hydroponic gardening, Water-efficient systems for urban setups**

**Practical: Setting up a simple vertical garden**

#### **Water Management and Irrigation Techniques**

**Water-efficient farming in cities, Drip irrigation, wicking beds, and rainwater harvesting, Common watering mistakes to avoid**

**Practical: Installing a basic drip irrigation system**

#### **Organic Pest and Disease Management**

**Common pests in urban vegetable gardens, Natural pest control methods, Integrated pest management strategies**

**Practical: Preparing homemade organic pesticides**

#### **Unit 4:**

**(15 Lectures + Practical's )**

##### **Sustainable Harvesting Post-Harvest Storage**

**Best harvesting practices for freshness and yield, Storage techniques for different vegetables, Selling produce: marketing and urban farming business ideas**

**Practical: Field visit and report**

##### **Food processing techniques:**

**Cleaning, sorting, peeling, cutting, blanching, drying and dehydration, canning, pickling, juice extraction, fermentation, jams, jellies, purees, pastes, packing and storing.**

**Practical: Visit to a processing unit and report**

##### **Organic food certification**

**National and International Organizations**

**National and International Standards and regulations, National Programme for Organic Production (NPOP) standards, On-site inspection, maintaining records, annual production plans**

**Practical: Applying for Organic farm certification**

#### **Reference Books:**

**Baboo, Kaptan, Vikas Singh Sengar, Sandeep Kumar Diwakar, Deo Kumar, and Avinash Kumar Singh - *A Textbook of Modern Organic Farming***

**Bansal, M.- *Basics of Organic Farming***

**Chakrabarty, Sujit and Sumati Narayan - *Art and Science of Organic Farming***

**NPCS Board of Consultants & Engineers - *The Complete Book on Organic Farming and Production of Organic Compost***

**Panda, Himadri - *The Complete Technology Book on Bio fertilizer and Organic Farming***

**Reddy, S.R. - *Principles of Organic Farming***

**प्रताप चिपळूणकर . जमिनीची सुपीकता**

**प्रताप चिपळूणकर . नांगरणीशिवाय शेती**

**प्रताप चिपळूणकर . जमिन व्यवस्थापन**

**Revolutionizing Agriculture with Soil Microbiology:**

**A Comprehensive Guide to Sustainable Farming Practices**

**भोसले बी. बी. ए. आणि इतर - शेती मित्रकीटक**

**प्रशांत नाईकवाडी - तांत्रिक दृष्टिकोनातून सेंद्रिय शेती – लेखक: (प्रकाशक: Amazon)**

**प्रशांत नाईकवाडी . सेंद्रिय शेती: मानके आणि प्रमाणीकरण**

**जगन्नाथ शिंदे. नैसर्गिक शेती**

**दिलीपराव बारडकर . जैविक खाते आणि औषधे**

**सुभाष पाळेकर - नैसर्गिक शेतीचे तत्वज्ञान व तंत्रज्ञान**

**(Additional Resource materials and reference books will be provided by the instructors.)**