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## FIRST-YEAR OF BACHELOR OF VOCATIONAL MINOR SUSTAINABLE AGRICULTURE REVISED SYLLABUS ACCORDING TO CBCS NEP2020

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COURSE TITLE: ORGANIC FARMING: NUTRIENT MANAGEMENT  
SEMESTER-I, W.E.F. 2024-2025

Recommended by the Board of Studies in BVOC (SA)

And

Approved by the Academic Council  
DevrukhShikshanPrasarakMandal's

Nya. TatyasahebAthalye Arts, Ved. S. R. Sapre Commerce, and Vid. DadasahebPitre  
Science College (Autonomous), Devrukh. Tal.Sangmeshwar, Dist. Ratnagiri-415804,  
Maharashtra, India

Academic Council Item No: \_\_\_\_\_

Name of the Implementing Institute	:	Nya. TatyasahebAthalye Arts, Ved. S. R. Sapre Commerce, and Vid. DadasahebPitre Science College (Autonomous), Devrukh. Tal.Sangmeshwar, Dist. Ratnagiri-415804,
Name of the Parent University	:	University of Mumbai
Name of the Programme	:	Bachelor of Vocation ( Sustainable Agriculture )
Name of the Department	:	Science
Name of the Class	:	First Year
Semester	:	First
No. of Credits	:	02
Title of the Course	:	Organic Farming: Nutrient Management
Course Code	:	B105SAT
Name of the Vertical in adherence to NEP 2020	:	Major and Minor
Eligibility for Admission	:	Any 12 <sup>th</sup> Pass and/or Diploma in agriculture seeking Admission to Degree Programme in adherence to Rules and Regulations of the University of Mumbai and Government of Maharashtra
Passing Marks	:	40%
Mode of Assessment	:	Formative and Summative
Level	:	UG
Pattern of Marks Distribution for TE and CIA	:	60:40
Status	:	NEP-CBCS
To be implemented from Academic Year	:	2024-2025
Ordinances/Regulations(if any)	:	

*Nya. TatyasahebAthalye Arts, Ved. S. R. Sapre Commerce and Vid. DadasahebPitre Science College, Devrukh (An Autonomous College Affiliated with University of Mumbai)*

## Syllabus for First Year of Bachelor of Vocation in Sustainable Agriculture

(With effect from the academic year 2024-2025)

**SEMESTER-I**

**Paper No.–**

**Course Title: Organic Farming: Nutrient Management No. of Credits - 02**

**Type of Vertical: Major and Minor**

**COURSE CODE: B105SAT**

**Learning Outcomes Based on BLOOM's Taxonomy:**

After completing the course, the learner will be able to...

Course Learning Outcome No.	Blooms Taxonomy	Course Learning Outcome
CLO-01	Remember	Remember Organic Nutrient management techniques in farm planning
CLO-02	Understand	Understand organic nutrient sources, their availability and methods of application
CLO-03	Apply	Apply crop rotation and cover cropping techniques in organic systems
CLO-04	Analyze	Analyze methods of composting and organic waste management
CLO-05	Evaluate	Evaluate nutrient deficiencies and imbalances for appropriate nutrient amendments.
CLO-06	Create	Create Innovative and sustainable practices to enhance nutrient availability minimize external inputs and optimize resource use efficiency.

## Syllabus for First Year of Bachelor of Vocation in SA

(With effect from the academic year 2024-2025)

**SEMESTER-I**

**Paper No.–**

**Course Title: Organic Farming: Nutrient Management No. of Credits - 02**

**Type of Vertical: Major and Minor**

**COURSE CODE: B105SAT**

COURSE CONTENT			
Module No.	Content	Credits	No. of Lectures
1	<ul style="list-style-type: none"> <li>☐ Components of Nutrient Management in Organic Farming, Pedological and Edaphological concept and components of soil. Soil ecology, Soil microbiology</li> <li>☐ Improvement in soil profile, Properties of soil (Physical, Chemical, Biological) and their significance.</li> <li>☐ Soil air, Soil water, Water Holding Capacity, Soil colloids</li> <li>☐ Farm Yard Manure (FYM): Process, Nutrients, Factors affecting nutrient quality of FYM, Uses, Green Manuring:</li> </ul>	01	15
2	<ul style="list-style-type: none"> <li>☐ Soil Testing, Collection of soil sample for soil testing, Parameters, Instruments for soil testing and sample collection, Application</li> <li>☐ Water Testing, Parameters, Instruments, Problems of soils, Saline and Alkali Soils, Biological Reclamation, Management of Saline soils</li> <li>☐ Macronutrients for plants, Micronutrients for plants, Various Soil amendments, Sources, Effects, Nutrients</li> <li>☐ Plants suitable as Green Manures, Nutrient Contents, Characteristics of Good Green Manure, Uses, Benefits</li> </ul>	01	15
	Total	02	30

### Required Previous Knowledge

No previous Knowledge is required.

### Access to the Course

The course is available for all the students admitted for Bachelor of Vocation (SA) as a Major or a minor. The students seeking admission in other disciplines may select the course as a minor considering the terms and conditions laid down by the University of Mumbai, the Government of Maharashtra, and the college, from time to time.

### Forms of Assessment

The assessment of the course will be of Formative and Summative type. At the beginning of the course diagnostic assessment will be carried out. The formative assessment will be used for the Continuous Internal Evaluation whereas the summative assessment will be conducted at the end of the term. The weightage for formative and summative assessment will be 50:50. The detailed pattern is as given below.

#### Term End Evaluation (30 Marks)

##### Question Paper Pattern

Time: 1.5 hours

Question No.	Unit/s	Question Pattern	Marks
Q.1	All	Fill in the Blanks	6
Q.4	All	Attempt any three question from the following five questions (Applied Questions)	24
<b>Total</b>			<b>30</b>

#### Internal evaluation (20 Marks)

Sr. No.	Description	Marks
1	Mid Term Examination	10
2	Active Participation in teaching learning Process	5
3	Subject related activities as assigned by the teacher	5
<b>Total</b>		<b>20</b>

### Grading Scale

The grading scale used is O to F. Grade O is the highest passing grade on the grading scale, and grade F is a fail. The Board of Examinations of the college reserves the right to change the grading scale.

**Reference for Module 1 :** Krushishastra by Prof. Harihar P. Gayake, orchid publication latur. Properties of soil - 3.11-3.20, Soil fertility- 3.21-3.27, Reclamation of soil 3.29, Soil testing- 3.32, Classification of soil types 3.35, Soil water 4.1, Organic fertilizers 6.8.

**Reference for Module 2 :** Principles of Organic Farming by S. R. Reddy

Publisher: kalyani publication Chapter 1, 5, 6 Principles of Organic Farming by S. R. Reddy

Publisher: kalyani publication Chapter 1, 5, 6

**Reference books :**

1. "Managing Cover Crops Profitably" by Andy Clark
2. "The Organic Farmer's Business Handbook: A Complete Guide to Managing Finances, Crops, and Staff" by Richard Wiswall
3. "The Organic Farmer's Guide to the Soil Food Web" by Dr. Elaine R. Ingham
4. "Building Soils for Better Crops" by Fred Magdoff and Harold van Es
5. "Teaming with Microbes: The Organic Gardener's Guide to the Soil Food Web" by Jeff Lowenfels and Wayne Lewis
6. "The Rodale Book of Composting" by Grace Gershuny and Deborah L. Martin
7. "The Organic Farming Manual: A Comprehensive Guide to Starting and Running a Certified Organic Farm" by Ann Larkin Hansen
8. "The Organic No-Till Farming Revolution: High-Production Methods for Small-Scale Farmers" by Andrew Mefferd
9. "The Art and Science of Grazing: How Grass Farmers Can Create Sustainable Systems for Healthy Animals and Farm Ecosystems" by Sarah Flack
10. "The Non-Toxic Farming Handbook: Strategies for a Healthier Farm and Home" by Philip Wheeler and Ronald Ward