



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

COURSE TITLE: FUNDAMENTALS OF AGRONOMY I
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	:	Fundamentals of Agronomy I
Course Code	:	B101SAT
Name of the Vertical in adherence to NEP 2020	:	Major and Minor
Eligibility for Admission	:	Any 12 th 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 2024-25)

SEMESTER-I

Paper No.–

Course Title: Fundamentals of Agronomy I

No. of Credits - 02

Type of Vertical: Major and Minor

COURSE CODE: B101SAT

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	Recall the basics of principles and practices of agronomy.
CLO-02	Understand	Acknowledge the procedures in nutrient management practices for better soil health and soil fertility
CLO-03	Apply	Apply knowledge to minimize environmental impact, conserve natural resources and promote long-term agricultural productivity
CLO-04	Analyze	Illustrate the working of various farming techniques
CLO-05	Evaluate	Summarize the Role of agronomy in development of Indian Agriculture
CLO-06	Create	Compose ability to educate farmers, agricultural professionals, and general public about principles and practical of crop production

Syllabus for First Year of Bachelor of Vocation in BFS

(With effect from the academic year 2024-25)

SEMESTER-I

Paper No.–

Course Title: Fundamentals of Agronomy I

No. of Credits - 02

Type of Vertical: Major and Minor

COURSE CODE: B101SAT

COURSE CONTENT			
Module No.	Content	Credits	No. of Lectures
1	Scope and opportunities of paddy cultivation Role of paddy farmer Agro climatic conditions required for paddy cultivation Tillage- Types, Implements and factors affecting tillage modern concepts of tillage, Transplantation- Four point method, Japanese method of transplantation. Seed- Characteristics of quality seed, Seed treatment and its objectives, Stages of seed, methods of sowing seed and sowing implements. Effect of Plant population on plant growth and yield. Methods and time of Application of manures. Nutrient use efficiency, Meaning and factors affecting nutrient use efficiency.	01	15
2	Scope and importance of Nursery and Garden Objectives of good nursery Different types and phases of nurseries and their layout. Types of Gardens Identification and use of basic tools, equipments and materials Preparation of rootstocks for grafting and budding. Propagation of plant materials – Cutting , grafting , layering etc. Well versed with health and safety measures in terms of personal safety and others safety as well.	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
Total			30

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
Total		20

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.

References for Module 1 :

1. Book: "Principles of Field Crop Production" by W. J. Lampe and W. O. Pruitt

Publisher: Melbourne ; New York : Oxford University Press Chapter: Plant Population and Its Effect on Crop Yield - Chapter 5, pages 67-82

2. Book: "Principles of Field Crop Production" by K.N. Reddy

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Publisher: Pearson Prentice Hall, 2006 Crop production: Page no. 390, Crop improvement : page no 118

3."Principles of Agronomy" by Yellamanda Reddy and Ghosh

Publisher: kalyani publishers

References for Module 2:

1. Horticulture: Principles and Practices" by George Acquaah

Publisher: Pearson Nursery and Garden Management - Chapter 10.

2. Essentials of plant nursery management by P. K. Ray Publisher: scientific Publisher

Nursery management: Page no 1-31, 251-270

3. Plant Propagation: Principles and Practices" by Hudson T. Hartmann et al. Publisher: pearson publication Methods of Propagation - Chapter 3

4.The Pruning Book" by Lee Reich Publisher: taunton press Tools and Equipment - Chapter 2

5. The Complete Book of Garden Magic" by Roy E. Biles Publisher: ferguson publishing company Types of Gardens - Chapter 4

Reference Books:

1. Balasubramanian, P and Palaniappan, S.P. 2001. Principles and Practices of Agronomy

AgroBios(India)Ltd., Jodhpur.

2. Cox, G.W and Atkins, M.D. 1979. Agricultural Ecology : An Analysis of World Food

Production Systems. W.H. Freeman and Company, San Francisco

3. De, G.C.1989.Fundamentals of Agronomy. Oxford & IBH Publishing Co., New Delhi.

4. Grigg, D.B. 1974. The Agricultural Systems of the World: An Evolutionary Approach.

Cambridge University Press, Cambridge.

5. Harlan, J.R. 1992. Crops and Man. American Society of Agronomy& Crop Science

Society of America, Madison

6.Cheema. S.S. and D.K. Dhaiwal and Sahota- theory and digest Agronomy

7. Chhidda Singh- Modern Techniques Of raising field crop