

Devrukh Shikshan Prasarak Mandal's
**Nya.Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce & Vid.
Dadasaheb Pitre Science College Devrukh.**

[Autonomous College]

SYLLABUS

Sr. No.	Heading	Particulars
1	Title of Course	B.Voc. Sustainable Agriculture Third Year
2	Eligibility for Admission	10+2 (of recognized board)
3	Passing Marks	40%
4	Ordinances/Regulations (if any)	-
5	No. of Years/Semesters	Three years/ Six semester
6	Level	U.G.
7	Pattern	Semester
8	Status	New Syllabus
9	To be implemented from Academic year	2022-23

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Syllabus for T.Y. B.Voc.

Program: B. Voc. Sustainable Agriculture

Course: T.Y. B.Voc. Sustainable Agriculture

(Credit Based Grading and Semester System with effect from the academic year 2020-2021)

B.Voc Programme

The University Grants Commission (UGC) had launched a scheme for skills development based higher education as part of college/university education, leading to Bachelor of Vocation (B.Voc) degree with multiple entry and exit points. The B.Voc program is focused on providing undergraduate studies which would also incorporate specific job roles along with broad based general education. This would enable the graduates completing B.Voc to make a meaningful participation in accelerating India's economy by gaining appropriate employment, becoming entrepreneurs and creating appropriate knowledge. The duration of the B. Voc courses will be six semesters in three Academic Sessions. At the end of each Semester, the candidates shall be required to present themselves for examination. The student who completes first semester successfully and is opting out from further education in B.Voc program, will be conferred Certificate in respective subject/trade. The student who completes first year i.e. first two semesters successfully and is opting out from further education in B.Voc program, will be conferred Diploma in respective subject/trade. Similarly, the student who completes first two years i.e. four semesters successfully and is opting out from further education will be conferred Advanced Diploma. The degree of B.Voc shall be conferred on the candidate who pursues the prescribed course of study for six semesters. The B. Voc degree is equivalent to BA/B.Sc degree for higher studies and employment.

Objectives of the Course

Many factors like, available infrastructure, capital and power, availability of resources, transport network, climate favoring to the high potential of industrial growth in Kokan region. The consistent growth of several Pharmaceutical, Chemical, Agrochemical, Food and Petrochemical industries has created several job avenues to the skilled graduates. The major hurdles for these industries are lack of adequately skilled and Good Laboratory Practice (GLP) oriented workforces.

This course is designed to fulfill the skilled workforce requirement of Research & Development and testing laboratories in various industries.

The course covers following objectives:-

- To propagate the ideas, practices and policies that constitutes the concept of sustainable agriculture.
- To provide the skill of different processes for Sustainable Agriculture
- To impart knowledge and proficiency in Organic farming, Certification process and marketing of organically raised agricultural produces
- To empower the students with an economically viable, socially supportive and ecologically sound education for agricultural sustainability.
- To provide education that emphasizes topography, soil characteristics, climate, pests, local availability of inputs and the individual grower's goals.
- Develop communication and soft skills between farmers and suppliers.
- Promote self-employment and income generation.
- Develop awareness about environment, soil and resources conservation for sustainable development.

Course Outcomes

- To enable the students to acquire knowledge on importance of agriculture and various processes of farming.

- To study the fundamentals of agronomy and classification of field crops.
- To study fundamentals of horticulture, gardening
- To learn preparation of various organic manures and using it for sustainable agriculture
- To study various processes of integrated farming practices

PROGRAMME STRUCTURE

The BVoc Programme shall include General Education components and Skill Components.

The credit distribution for the programme is shown below.

Normal Calendar Duration	Skill Component Credits	General Education Credits	Total Credits
One semester	18	12	30
Two Semesters	36	24	60
Four Semesters	72	48	120
Six Semesters	108	72	180

Year/Semester	NSQF Certification Level	Vocational Qualification	Title of Programme
First Year (Sem. I)	4	Certificate Course (Duration 6 Months)	Certificate course in Sustainable Agriculture
First Year (Sem. II)	5	Diploma (Duration 1 Year)	Diploma in Sustainable Agriculture
Second Year (Sem. III and IV)	6	Advanced Diploma (Duration two years)	Advanced Diploma in Sustainable Agriculture
Third Year	7	B. Voc. (Sustainable Agriculture)	B. Voc. in Sustainable Agriculture

(Course Code details: SA-Sustainable Agriculture,
G-General Education,
S- Skill Component
1- First Semester,
1S-First Skill Paper,
2S- Second Skill Paper,
1G- First General Paper
2G- Second General Paper

I- Internship/training/Project/Dissertation.

BACHELOR OF VOCATION

Sustainable Agriculture (to be implemented from 2022-23)

Semester-VI

Code	Paper	Credits	Lectures	L/Wk
General Component				
BUSAT 61	Agricultural economics	3	45	3
BUSAT 62	Agricultural Journalism	3	45	3
BUSAT 63	Entrepreneurship Development and Business Communication	3	45	3
BUSAT 64	Introductory Agroforestry	3	45	3
Skill Component				
BUSAP 61	Agricultural economics(Practical)	2	60	4
BUSAP 62	Agricultural Journalism(Practical)	2	60	4
BUSAP 63	Entrepreneurship Development and Business Communication / Business Module (Project)	5	150	10
BUSAP 65	RAWE -Rural agricultural work experience/Study tour	5	150	10
BUSAP 66	Industrial Training	4	120	8

**B. Voc. Sustainable Agriculture
SEMESTER VI General Component**

Paper I: Agricultural economics

Code: BUSAT 61

Credits: 3

Lectures: 45

Objectives

- To study the fundamentals of agricultural economics.
- To study the production function and marketing of commodities.

Module 1: Fundamentals of Agril. Economics

Meaning, scope, subject matter, definitions, of economics, micro and macroeconomics, basic concept: goods and services, desire, want, demand, utility, cost and price, wealth, capital, income and welfare,

Module 2: Fundamentals of financial co-operation

Agriculture finance meaning, scope and significance, credit analysis, four “R” and three “C” of credit, introduction to higher financial institution- RBI, NABARD, IMF, RRB, commercial bank, institutional and non-institutional sources.

Module 3: Production function

Concept of production function and its type, use of production function in decision making, factor-product, factor-factor, product-product relationship, law of equi-marginal, or principle of opportunity cost, law of comparative advantage, least cost combination, Law of marginal return, elasticity of production, concept

Module 4: marketing of commodities.

definition of agricultural marketing, market structure, classification and characteristics of agricultural marketing, marketing functionaries and channels, marketing cost, margin and price spread, risk in co-operative marketing, role of government in agriculture marketing and problems in marketing of agriculture commodities

Text books:

1. A Textbook of Agricultural Economics” by C B Singh and R K Singh
2. Agricultural Economics” by Thomas Nixon Carver
3. Introduction to Agricultural Economics” by Bilgram
4. “Fundamentals Of Agricultural Economics” by Singh A

Paper II: Agricultural Journalism

Code: BUSAT 62

Credits: 3

Lectures: 45

Objectives

- To study fundamentals of agricultural Journalism.

Module 1

Journalism: Meaning, definition, importance, Agricultural Journalism: Meaning, definition, agricultural journalism in rural areas, problem and prospectus of agricultural journalism

Module 2

Agricultural Journalism: The nature and scope of agricultural journalism, characteristics and training of the agricultural journalist, how agricultural journalism is similar to and different from other types of journalism. Newspapers and magazines as communication media: Characteristics; kinds and functions of newspapers and magazines, characteristics of newspaper and magazine readers

Module 3

Form and content of newspapers and magazines: Style and language of newspapers and magazines, parts of newspapers and magazines. The agricultural story: Types of agricultural stories, subject matter of the agricultural story, structure of the agricultural story. Gathering agricultural information: Sources of agricultural information, interviews, coverage of events, abstracting from research and scientific materials, wire services, other agricultural news sources.

Module 4

Writing the story: Organizing the material, treatment of the story, writing the news lead and the body, readability measures. Illustrating agricultural stories: Use of photographs, use of artwork (graphs, charts, maps, etc.), writing the captions. Editorial mechanics: Copy reading, headline and title writing, proofreading, lay outting.

Text books:

1. Agricultural Journalism B.L. Jana
2. Agricultural Extension and Farm Journalism by A.K.Singh

Paper IV: Introductory Agroforestry

Code: BUSAT 64

Credits: 3

Lectures: 45

Objectives

- To Study different aspects of Agroforestry

Module 1

Agroforestry-definition, objectives and potential. Distinction between Agroforestry and social forestry. Status of Indian forests and role in India farming systems.

Module 2

Agroforestry system, sub-system and practice: agri-silviculture, silvipastoral, horti-silviculture, horti-silvipastoral, shifting cultivation, taungya, home gardens, alley cropping, intercropping, wind breaks, shelterbelts and energy plantations.

Module 3

Planning for agroforestry- constraints, diagnosis and design methodology, selection of tree crops species for agroforestry. Study and Identification of seeds and seedlings of multipurpose tree species. Agroforestry project-national, overseas, MPTS their management practices .

Module 4

Economics of cultivation-nursery and planting (Acacia catechu, Delbergia sissoo, Tectona, Populus, Grewia, Eucalyptus, Quercus spp., bamboo, Tamarindus and Neem, etc.) Visit to agroforestry fields to study the compatibility of MPTS with agriculture crops: silvi-pasture, alley cropping, horti-silviculture, agro-silvipature fuel and fodder block. Visit to social forestry plantations- railway line plantations.

Text Books & References:

1. Introduction to forestry by S.R.Reddy and C.Nagamani
2. Introduction to forestry and agroforestry by K.T.Parthiban

Web sites:

<http://www.agrimoon.com/>
<http://www.agriinfo.in/>
<http://www.agriglance.com/>
<http://agritech.tnau.ac.in/>

B. Voc. Sustainable Agriculture
SEMESTER VI (Skill Component)

Paper I: Agricultural economics

Code: BUSAP 61

Credits: 2

Lectures: 60

Objectives

- To acquaint with skills of agricultural economics.
- To study the production function and marketing of commodities.

Practical:

1. Study the subject matter of agriculture economics.
2. Analysis of progress and performance of commercial banks and RRBs.
3. Visit to a commercial bank and cooperative bank and cooperative society to acquire firsthand knowledge of their management, schemes and procedures.
4. Determination of cost of cultivation.
5. Computation of marketable and marketed surplus of important commodities.
6. Visit to local market to study various marketing functions performed by different agencies.
7. Identification of marketing channels for selected commodities.
8. Visit to APMC

Paper II: Agricultural Journalism

Code: BUSAP 62

Credits: 2

Lectures: 60

Objectives

- To develop skills of agricultural Journalism.
1. Practice in interviewing.
 2. Covering agricultural events.
 3. Abstracting stories from research and scientific materials and from wire services.
 4. Writing different Types of agricultural stories.
 5. Selecting pictures and artwork for the agricultural story.
 6. Practice in editing, copy reading, headline and title writing, proofreading, lay outing.
 7. Testing copy with a readability formula.
 8. Visit to a publishing office

Paper III: Entrepreneurship Development and Business Communication

Code: BUSAP 63

Credits: 5

Lectures: 150

Practical's: Project for Skill Development and Entrepreneurship

A student has to register for any two projects from the package of modules.

1. Production Technology for Bioagents and Biofertilizer
2. Seed Production and Technology
3. Mushroom Cultivation Technology
4. Soil, Plant, Water and Seed Testing
5. Commercial Beekeeping
6. Poultry Production Technology
7. Commercial Horticulture
8. Floriculture and Landscaping
9. Food Processing
10. Agriculture Waste Management
11. Organic Production Technology
12. Commercial Sericulture

Paper IV: RAWE (Rural Agricultural Work Experience) And study tour

Code: BUSAP 65

Credits: 5

Lectures: 150

Students must submit detailed Rawe (4 week) as well as study tour (1 week) report related topics on industrial, field, KVK , agricultural institute, horticulture nursery and dairy technology visit in a specific manner on a project paper.

Rural Agricultural Work Experience

1 General orientation & on campus training by different faculties

2 Village attachment, Unit attachments in Univ./College/KVK/Research Station

Village Attachment Training Programme

1. Orientation and Survey of Village
2. Agronomical Interventions
3. Plant Protection Interventions
4. Soil Improvement Interventions (Soil sampling and testing)
5. Fruit and Vegetable production interventions
6. Food Processing and Storage interventions
7. Animal Production Interventions
8. Extension and Transfer of Technology activities
9. Selecting pictures and artwork for the agricultural story.
10. Practice in editing, copy reading, headline and title writing, proofreading, layouting.

Paper IV: Agro Industrial Attachment/ Industrial Training

Code: BUSAP 66

Credits: 4

Lectures: 120

Agro-Industrial Attachment (AIA): The students would be attached with the agroindustries for a period of 3 weeks to get an experience of the industrial environment and working.

Students shall be placed in Agro-and Cottage industries and Commodities Boards for 03 weeks.

1. Industries include Seed/Sapling production, Pesticides-insecticides, Post-harvest processing-value addition, Agri-finance institutions, etc. Activities and Tasks during Agro-Industrial Attachment Programme
2. Acquaintance with industry and staff
3. Study of structure, functioning, objective and mandates of the industry
4. Study of various processing units and hands-on trainings under supervision of industry staff
5. Ethics of industry
6. Employment generated by the industry
7. Contribution of the industry promoting environment
8. Learning business network including outlets of the industry
9. Skill development in all crucial tasks of the industry
10. Documentation of the activities and task performed by the students
11. Performance evaluation, appraisal and ranking of students