



"Education for Knowledge, Science, and Culture"
- Shikshanmaharshi Dr. Bapuji Salunkhe
Shri Swami Vivekanand Shikshan Sanstha's
Vivekanand College, Kolhapur
(Autonomous)



Department of Botany

Annual Teaching Plan

2021-2022

Annual Teaching Plan 2021-2022

Department of Botany



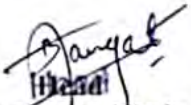
Department of Botany

Annual Teaching Plan

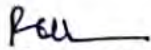
2021-2022

Index

Sr. No.	Title	Page No.
1.	Dr. B. T. Dangat	1-7
2.	Dr. A. R. Kasarkar	8-15
3.	Dr. J. M. Gorule	16-23
4.	Ms. S. S. Wadkar	24-29
5.	Dr. A.R. Alvikar	30-35
6.	Dr. P. D. Patil	36-43
7.	Dr. P.P. Jadhav	44-47
8.	Dr. S. B. Koparde	48-53
9.	Dr. B. N. Shinde	54-59
10.	Dr. M.N. Desai	60-67
11.	Dr. L. A. Kagale	68-74
12.	Dr. S.D. Patil	75-82
13.	Dr. K.P.Patil	83-88


Department of Botany
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Department of Botany

Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: **Dr. Bhaurav Tukaram Dangat**

Programme: **B.Sc. I**

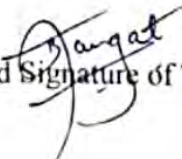
Semester: **II**

Subject: **Botany**

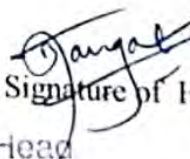
Course Title: “ **Angiosperms Taxonomy** ”

Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit 1. Angiosperms Taxonomy	1a. Salient features of Angiosperms.
04	04	08		
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit.1: “Angiosperms Taxonomy”	1b. Taxonomy – Introduction, Function (Identification, Nomenclature and Classification), Importance.
04	04	08		
Month: January			Module/Unit:	Sub-units planned
04	04	08	Unit.1: “Angiosperms Taxonomy”	1c. Salient features of International Code of Botanical Nomenclature (ICBN).

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Department of Botany
Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: **Dr. Bhaurav Tukaram Dangat**

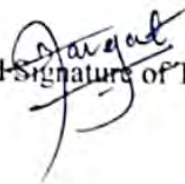
Programme: **B.Sc. I Semester: I**

Subject: **Botany**

Course Title: **"Biodiversity in Microbes, Algae and Fungi"**

Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit.2: Algae and Fungi	2b. Fungi: General Characters, Classification (As per Ainsworth) up to class with characters and suitable example, Economic importance.
04	04	08		
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit.2: Algae and Fungi	A. Morphology and Life Cycles (Excluding developmental stages) of 1. Zygomycotina- <i>Mucor</i> 2. Ascomycotina- <i>Penicillium</i>
04	04	08		
Month: January			Module/Unit:	Sub-units planned
04	04	08	Unit.2: Algae and Fungi	2c. Lichen: Definition, structure of thallus, types, reproduction & economic importance

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Department of Botany

Academic Year: 2021-2022

Annual Teaching Plan

Name of the teacher: **Dr. Bhaurav Tukaram Dangat**

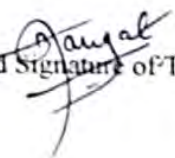
Programme: **B.Sc. II Semester: III**

Subject: **Botany**

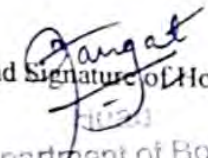
Course Title: **"Taxonomy, Embryology and Plant Physiology"**

Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit: I Organization of flower :	Ia: Concept of flower as a modified shoot, structure of typical flower. Ib: Structure of typical stamen, microsporogenesis, Pollen germination and development of male gametophyte.
04	04	08		
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit: I Organization of flower :	Ic: Structure of typical gynoecium, structure of a typical ovule, types of ovules.
04	04	08		
Month: January			Module/Unit:	Sub-units planned
04	04	08	Unit: I Organization of flower :	Id: Megasporogenesis, structure of embryo sac: Monosporic (<i>Polygonum</i>), Bisporic (<i>Allium</i>) and Tetrasporic (<i>Pepromia</i>) and development of female gametophyte.

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Name of the teacher: **Dr. Bhaurav Tukaram Dangal**

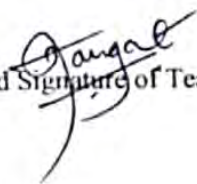
Programme: **B.Sc. II Semester: IV**

Subject: **Botany**

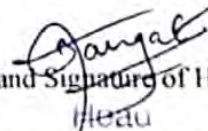
Course Title: **"Plant Anatomy and Plant Metabolism"**

Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	<p style="text-align: center;">"Plant Anatomy"</p> <p style="text-align: center;">Unit: I. Organization of flower :</p>	<p style="text-align: center;">1a: Plant organs (Introductory)</p>
04	04	08		
Month: April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	<p style="text-align: center;">Unit: I. Organization of flower :</p>	<p style="text-align: center;">1b: Development of plant body (Seedling development)</p>
04	04	08		
Month: May			Module/Unit:	Sub-units planned
04	04	08	<p style="text-align: center;">Unit: I. Organization of flower :</p>	<p style="text-align: center;">1c: Internal organization</p>

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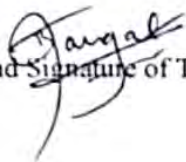
Programme: **B.Sc. III Semester: V**

Subject: **Botany**


Course Title: **"Plant Biochemistry and Stress Physiology"**

Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit : I Plant Biochemistry	Carbohydrate metabolism. 1a: Introduction and classification of Carbohydrates 1b: Properties of Monosaccharide's, Oligosaccharide's, Polysaccharide's
02	04			
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit : I Plant Biochemistry	1c: Significance Protein metabolism. 1d: Introduction, properties and characters of amino acids
03	04			
Month: January			Module/Unit:	Sub-units planned
03	04		Unit : I Plant Biochemistry	1e: Protein- structure and classification 1f: Protein synthesis

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Annual Teaching Plan

Name of the teacher: **Dr. Bhaurav Tukaram Dangat**

Programme: **B.Sc. III Semester: VI**

Subject: **Botany**

Course Title: **"Molecular Biology and Biotechnology"**

Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section I Unit : 2 Recombinant DNA Technology	2a: Introduction and Principle
02				
Month: April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Recombinant DNA Technology	2b: Enzymes involved in recombinant DNA technology
03				
Month: May			Module/Unit:	Sub-units planned
03			Recombinant DNA Technology	2c: Cloning Vectors (Plasmid, Bacteriophage and Cosmids) 2d: Gene Amplification: PCR techniques

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Academic Year: 2021-2022

Annual Teaching Plan

Name of the teacher: **Dr. Bhaurav Tukaram Dangat**

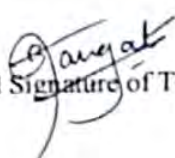
Programme: **B.Sc. II Semester: VI**

Subject: **Plant Protection**

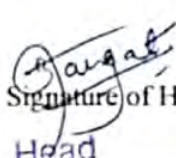
Course Title: **"Weed Science and Insect Pest"**

Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section : I "Weed Science"	Unit II. Study of following weeds with reference to a) Gross morphology b) Reproduction c) Ecology d) Dispersal e) Management
04	04			
Month: April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section : I "Weed Science"	1. <i>Argemone Mexicana</i> 2. <i>Portulacaoleracea</i> 3. <i>Partheniumhysterophorus</i> 4. <i>Eupatorium species</i>
04	04			
Month: May			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section : I "Weed Science"	5. <i>Alternantherasessilis</i> 6. <i>Amaranthusspinosus</i> 7. <i>Cassia tora</i> 8. <i>Cyperusrotundus</i> 9. <i>Cynodondactylon</i>
04	04			

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Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

Programme - B. Sc. I

Semester- I

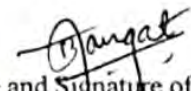
Subject: Botany

Course Title: " Biodiversity in Microbes , Algae and Fungi ."

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper –I Section – I Unit II. Algae	General Character Classification of Algae
04	-	04		
Month - December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Algae	Economic Importance of Algae Study of <i>Nostoc</i>
05	-	05		
Month- January			Module/Unit:	Sub-units planned
03	-	03	Algae	Study of <i>Spirogyra</i> Study of <i>Diatoms</i> Study of Algal Biofertilizer and Its Importance



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(Dr. A. R. Kasarkar)



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Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

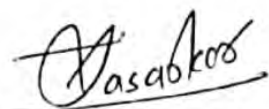
Programme - B. Sc. II

Semester- III

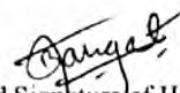
Subject: Botany

Course Title: " Taxonomic Literature and Plant Families ."

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper –III Section – I Unit III.	Flora, Monograph, Revisions,
04	-	04	Taxonomic Literature	Manuals, Journals, Reference Books
Month - December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Taxonomic Literature &	Research Papers, Websites and
05	-	05	Plant Families	Catalogues Study of family Amaranthaceae
Month- January			Module/Unit:	Sub-units planned
04	-	04	Plant Families	Study of family Orchidaceae, Liliaceae



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Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

Programme - B. Sc. II

Semester- III

Subject: Plant Protection

Course Title: " General Agriculture and Plant Pathology ."

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper -I Section - I Unit IV.	Chemical Methods
04	08	12	Methods of Plant Protection Part -II	
Month - December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Methods of Plant Protection Part -II	Biological Methods Legal Methods
05	08	13		
Month- January			Module/Unit:	Sub-units planned
04	08	12	Methods of Plant Protection Part -II	Legal Methods Crop Resistance

Name and Signature of Teacher
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Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

Programme - B. Sc. III

Semester- V

Subject: Botany

Course Title: " Cytological and Research Technique in Life Science ."

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper -IX Section - I Unit III Analytical Techniques in Plant Sciences	Principle of Microscopy- Light Microscopy, Electron Microscopy
04	-	04		
Month - December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Analytical Techniques in Plant Sciences	Fluorescence Microscopy, Chromatography, Micrometry
05	-	05		
Month- January			Module/Unit:	Sub-units planned
03	-	03	Analytical Techniques in Plant Sciences	Microphotography , Electrophoresis

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Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

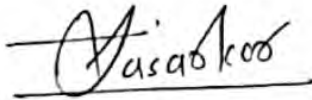
Programme - B.Sc. I

Semester- II

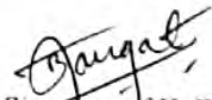
Subject: Botany

Course Title: " Angiosperms Taxonomy ."

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper –IV Section – I Unit I.	Salient Features of Angiosperms,
05	-	05	Angiosperms Taxonomy	Taxonomy- Introduction, Function, Importance
Month – April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Angiosperms Taxonomy	ICBN, Bentham and Hookers System of Classification
04	-	04		
Month- May			Module/Unit:	Sub-units planned
04	-	04	Angiosperms Taxonomy	Family Malvaceae, Solanaceae, Nyctaginaceae, Amaryllidaceae



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Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

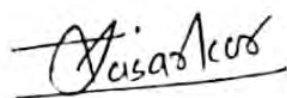
Programme - B. Sc. II

Semester- IV

Subject: Botany

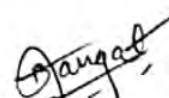
Course Title: " Plant Anatomy and Plant Metabolism ."

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper -IV Section – II Unit IV Seed Dormancy andGermination	Concept of Dormancy, Causes and types of seed dormancy
05	-	05		
Month – April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Seed Dormancy andGermination	Methods of breaking ofseed dormancy. Seed Germination
03	-	03		
Month- May			Module/Unit:	Sub-units planned
04	-	04	Seed Dormancy andGermination	Types of Seed Germination, Factors affecting on seed germination



Name and Signature of Teacher

(Dr. A. R. Kasarkar)



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Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

Programme - B. Sc. II

Semester- IV

Subject: Plant Protection

Course Title: " Weed Science and Insect Pest ."

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper –II Section –I Unit III	Mechanical methods
04	08	12	Methods of Weed Management	Biological methods
Month – April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Methods of Weed Management	Chemical methods
05	08	13		Study of weedicides : Glyphosate, Gramoxane
Month- May			Module/Unit:	Sub-units planned
04	08	12	Methods of Weed Management	Study of weedicides : Oxyfluorfen. Study of House Hold Pest
Month- June			Module/Unit:	Sub-units planned
04	-	04	Unit IV ; Study of House Hold Pest	Study of Rat Study of House hold pest – <i>Drosophila</i> , House fly, Mosquito

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Name and Signature of Teacher
(Dr. A. R. Kasarkar)



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(Dr. B. J. Dangate)
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Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

Programme - B. Sc. III

Semester- VI

Subject: Botany

Course Title: " Horticulture , Forestry and Herbal Technology ."

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper –XVI Section – II	Introduction and Importance
04	-	04	Unit I Horticulture	Methods of Propagation : Asexual
Month – April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Horticulture	Methods of Propagation : Sexual
05	-	05		Plant Nursery : Introduction, Types of Nursery.
Month- May			Module/Unit:	Sub-units planned
04	-	04	Horticulture	Infrastructure and requirement, Fertilizers and pesticides Commercial importance

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Academic Year: 2021-2022

Name of the teacher: **Dr. Jyoti Mahadev Gorule**

Programme: **B. Sc. I**

Semester: **I**

Subject: **Botany**

Course Title: "**Biodiversity in cryptogams and Gymnosperms**"

Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II Unit. 3: Bryophytes and Pteridophytes	General characters, Adaptation to land habit, Classification (As per G. M. Smith) upto class, Alternation of Generation, Economic importance.
03	04	05		
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II Unit. 3: Bryophytes and Pteridophytes	Morphology, Anatomy and Life Cycle (Excluding developmental stages) Hepaticopsida - <i>Riccia</i>
04	05	09		
Month: January			Module/Unit:	Sub-units planned
03	04	06	Section II Unit. 3: Bryophytes and Pteridophytes	Morphology, Anatomy and Life Cycle (Excluding developmental stages) Anthocerotopsida- <i>Anthoceros</i>

Name and Signature of Teacher

[Dr. Jyoti M. Gorule]



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Annual Teaching Plan

Academic Year: **2021-2022**

Name of the teacher: **Dr. Jyoti Mahadev Gorule**

Programme: **B. Sc. II**

Semester: **III**

Subject: **Botany**

Course Title: **"Plant Anatomy and Plant Metabolism"**

Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals- II	Total	-	-
-	04	04		
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	-	-
-	04	04		
Month: January			Module/Unit:	Sub-units planned
-	04	04	-	-

Jyoti M. Gorule

Name and Signature of Teacher

[Dr. Jyoti M. Gorule]

Jyoti M. Gorule

Name and Signature of HoD
 Department of Botany
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Academic Year: 2021-2022

Name of the teacher: Dr. Jyoti Mahadev Gorule

Programme: B. Sc. II

Semester: III

Subject: Plant Protection

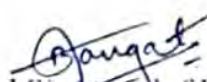
Course Title: "General Agriculture and Plant Pathology"

Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section I: 2 b: Advanced Agricultural practices with reference to concept and applications	A) Organic Farming B) Transgenic methods (<i>Agrobacterium</i> mediated gene transfer), Examples of Transgenic crops.
02	--	02		
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit. III. Methods of Plant Protection part -I .	3a: Cultural methods – Tillage, crop rotation, trap crops, fertilizer applications 3b: Mechanical methods – Field sanitation, Hand picking, Destruction of infected plants / plant parts
03	--	03		
Month: January			Module/Unit:	Sub-units planned
03	--	03	Unit. III. Methods of Plant Protection part -I .	3b. Destruction of egg masses, light traps, use of sticky bands, bagging for the pests. 3c: Physical methods – Heat and soil solarisation



Name and Signature of Teacher

[Dr. Jyoti M. Gorule]



 Name and Signature of HoD
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Vivekanand College, Kolhapur (Autonomous)

Department of Botany

Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: Dr. Jyoti Mahadev Gorule

Programme: B. Sc. III

Semester: V

Subject: Botany

Course Title: "Microbiology, Plant Pathology and Biofertilizers"

Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II: Unit I Microbiology	1a: Methods in Microbiology
04	04	08		
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II: Unit I Microbiology	1b: Micro-organisms in Biological world
04	04	08		
Month: January			Module/Unit:	Sub-units planned
02	03	05	Section II: Unit I Microbiology	1c: Scope of Microbes in Industry and Environment

Name and Signature of Teacher

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Vivekanand College, Kolhapur (Autonomous)
Department of Botany
Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: **Dr. Jyoti Mahadev Gorule**

Programme: **B. Sc. I**

Semester: **II**

Subject: **Botany**

Course Title: "**Plant Ecology and Taxonomy**"

Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals-II	Total	Section II Unit 4. Morphology and modifications in Angiosperms	4a. Morphology and modification of Root.
04	04	04		
Month: April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II Unit 4. Morphology and modifications in Angiosperms	4b. Morphology and modification of Stem.
04	05	09		
Month: May			Module/Unit:	Sub-units planned
04	04	04	Section II Unit 4. Morphology and modifications in Angiosperms	4c. Morphology and modification of Leaf.

Name and Signature of Teacher

[*Dr. Jyoti M. Gorule*]



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 Kolhapur

Vivekanand College, Kolhapur (Autonomous)
Department of Botany
Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: **Dr. Jyoti Mahadev Gorule**

Programme: **B. Sc. II**

Semester: **IV**

Subject: **Botany**

Course Title: **"Plant Anatomy and Plant Metabolism"**

Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals-II	Total	-	-
-	04	04		
Month: April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	-	-
-	04	04		
Month: May			Module/Unit:	Sub-units planned
-	03	03	-	-

Name and Signature of Teacher

[*Dr. Jyoti M. Gorule*]

Name and Signature of HoD

Department of Botany
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Vivekanand College, Kolhapur (Autonomous)
Department of Botany
Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: **Dr. Jyoti Mahadev Gorule**

Programme: **B. Sc. II**

Semester: **IV**

Subject: **Plant Protection**

Course Title: **"Weed Science and Insect Pest"**

Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II: Unit . II. Study of insect pests	Jowar – Stem borer Sugarcane – White grub Gram – Pod borer
04	--	04		
Month: April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II: Unit . II. Study of insect pests	Mango – Hoppers Brinjal – Fruit borer Rose – Bud borer
04	--	04		
Month: May			Module/Unit:	Sub-units planned
04	--	04	Section II: Unit . II. Study of insect pests	Rice Weevil Pulse beetle

Name and Signature of Teacher

[*Dr. Jyoti M. Gorule*]

Name and Signature of HoD
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Vivekanand College, Kolhapur (Autonomous)
Department of Botany
Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: **Dr. Jyoti Mahadev Gorule**

Programme: **B. Sc. III**

Semester: **VI**

Subject: **Botany**

Course Title: **“Horticulture, Forestry and Herbal Technology”**

Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II: Unit III Forestry	3a: Introduction, Forest types of India 3b: Wild life and Biosphere reserves
04	04	08		
Month: April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II: Unit III Forestry	3c: Social and Agricultural Forestry 3d: Forest research education and Training institutions
04	04	08		
Month: May			Module/Unit:	Sub-units planned
04	03	07	Section II: Unit III Forestry	3e: Forest Acts 3f: Different Plant as a forest products

Name and Signature of Teacher

[*Dr. Jyoti M. Gorule*]



Name and Signature of HoD

[*Gangal*]
 Department of Botany
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Vivekanand College, Kolhapur (Autonomous)
Department of Botany
Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: Ms.Snehal Sanjay Wadkar

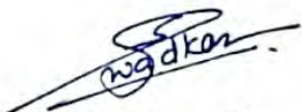
Programme: B. Sc. I

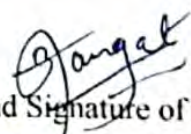
Semester: I

Subject: Botany

Course Title: "Biodiversity in cryptogams and Gymnosperms"

Month: November			Module/Unit:	Sub-units planned
Lectures				
-	08	08		
Month: December			Module/Unit:	Sub-units planned
Lectures				
-	08	08		
Month: January			Module/Unit:	Sub-units planned
-	07	07		


Name and Signature of Teacher
(Ms. Snehal S. Wadkar)


Name and Signature of HOD
(Dr. B. T. Dangat)
Department of Botany
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Kolhapur



Vivekanand College, Kolhapur (Autonomous)
Department of Botany
Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: Ms. Snehal Sanjay Wadkar


Programme: B. Sc. II

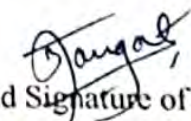
Semester: III

Subject: Botany

Course Title: "Plant Anatomy and Plant Metabolism"

Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals-II	Total	-	-
-	08	08		
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	-	-
-	08	08		
Month: January			Module/Unit:	Sub-units planned
-	08	08	-	-


 Name and Signature of Teacher
 (Ms. Snehal S. Wadkar)


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Vivekanand College, Kolhapur (Autonomous)

Department of Botany

Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: Ms. Snehal Sanjay Wadkar


Programme: B. Sc. III

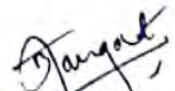
Semester: V

Subject: Botany

Course Title: "Microbiology, Plant Pathology and Biofertilizers"

Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II: Unit IV- Biofertilizer	Ia: Microbes in agriculture : Biological nitrogen fixation, Mycorrhizae
04	-	04		
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II: Unit IV- Biofertilizer	Ib: Organic farming: Introduction and concept , scope
04	-	04		
Month: January			Module/Unit:	Sub-units planned
02	-	02	Section II: Unit IV- Biofertilizer	Ic: Green Manuring Id: Bicompost making methods


Name and Signature of Teacher
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Vivekanand College, Kolhapur (Autonomous)
Department of Botany
Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: Ms. Snehal Sanjay Wadkar

Programme: B. Sc. I

Semester: II

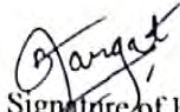
Subject: Botany

Course Title: "Plant Ecology and Taxonomy"

Month: March			Module/Unit:	Sub-units planned
Lectures				
-	08	08		
Month: April			Module/Unit:	Sub-units planned
Lectures				
-	08	08		
Month: May			Module/Unit:	Sub-units planned
-	08	08		



Name and Signature of Teacher
(Ms. Snehal S. Wadkar)



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Vivekanand College, Kolhapur (Autonomous)
Department of Botany
Annual Teaching Plan

Academic Year: 2021-2022

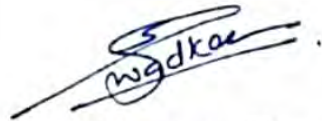
Name of the teacher: Ms.Snehal Sanjay Wadkar

Programme: B. Sc. II Semester: IV

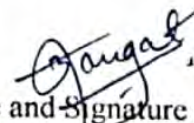
Subject: Botany

Course Title: "Plant Anatomy and Plant Metabolism"

Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals-II	Total	-	-
-	08	08		
Month: April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	-	-
-	08	08		
Month: May			Module/Unit:	Sub-units planned
-	08	08	-	-



Name and Signature of Teacher
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Vivekanand College, Kolhapur (Autonomous)
Department of Botany
Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: Ms.Snehal Sanjay Wadkar


Programme: B. Sc. III

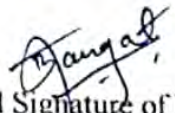
Semester: VI

Subject: Botany

Course Title: "Biostatistics, Economic Botany and Ethnobotany"

Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II: Unit III Economic Botany II	3a: Beverages- Tea and Coffee 3b: Fiber Yielding Plants - Cotton and Hibiscus canabinis
04	-	04		
Month: April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II: Unit III Economic Botany II	3c: Oil yielding – Pongamia pinnata and Sunflower 3d: Dye : Bixa and Lawsonia
04	-	04		
Month: May			Module/Unit:	Sub-units planned
04	-	04	Section II: Unit III Economic Botany II	Tests on sub points mentioned as above


 Name and Signature of Teacher
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 Name and Signature of HOD
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 Kolhapur



Vivekanand College, Kolhapur (Autonomous)
 Department of Botany
Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: **Dr. Annapurna Ram Alvikar**

Programme : **B.Sc I**

Semester: **I**

Subject: **Botany**

Course Title: **"Bryophytes, Pteridophytes and Gymnosperms"**

Month : November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II : Unit I – 1b: Pteridophytes	1b: Introduction, General characters, Classification (As per G. M. Smith) upto class A: Morphology, Anatomy of <i>Selaginella</i>
03	04	07		
Month : December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II : Unit I – 1b: Pteridophytes	A: Anatomy of <i>Selaginella</i> Morphology and Anatomy of <i>Pteris</i>
04	04	08		
Month : January			Module/Unit:	Sub-units planned
03	04	08	Section II : Unit I – 1b: Pteridophytes	A: Anatomy of <i>Pteris</i> B: Heterospory and Seed habit in Pteridophytes

Name and Signature of Teacher
 (Dr. Annapurna. R. Alvikar)



Name and Signature of HoD
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 Vivekanand College
 Kolhapur

Vivekanand College, Kolhapur (Autonomous)
 Department of Botany
 Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: **Dr. Annapurna Ram Alvikar**

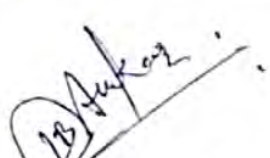
Programme : **B.Sc II**

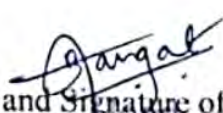
Semester: **III**

Subject: **Botany**

Course Title: **"Plant Physiology"**

Month : November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
--	04	04	---	---
Month : December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
--	04	04	---	---
Month : January			Module/Unit:	Sub-units planned
--	04	04	---	---


 Name and Signature of Teacher
 (Dr. Annapurna. R. Alvikar)


 Name and Signature of HoD
 Department of Botany
 Vivekanand College
 Kolhapur



Vivekanand College, Kolhapur (Autonomous)
 Department of Botany
 Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: **Dr. Annapurna Ram Alvikar**

Programme : **B.Sc III**

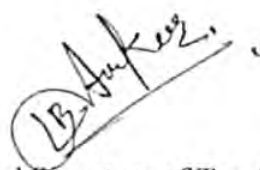
Semester: **V**

Subject: **Botany**

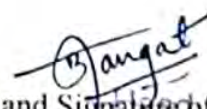
Course Title: **"Plant Biochemistry and Stress Physiology"**

Month : November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section I : Unit III – Stress Physiology	3a: Introduction, Defining Plant Stress
04	04	08		
Month : December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section I : Unit III – Stress Physiology	3b: Types of Stress – Water Stress, Salinity Stress, High light Stress
04	04	08		
Month : January			Module/Unit:	Sub-units planned
04	04	08	Section I : Unit III – Stress Physiology	3b: High light Stress, Temperature Stress, Calcium Modulation, Phospholipid signalling

Name and Signature of Teacher
 (Dr. Annapurna. R. Alvikar)




Name and Signature of HoD
 Department of Botany
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Vivekanand College, Kolhapur (Autonomous)
 Department of Botany
Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: **Dr. Annapurna Ram Alvikar**

Programme : **B.Sc I**

Semester: **II**

Subject: **Botany**

Course Title: **"Plant Ecology"**

Month : March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section I : Unit I – Ecological factors and Plant Communities	1a: Introduction, Definition of Ecology 1b: Ecological Factors: i: Edaphic factors: Soil: Origin and Formation. ii : Climatic factors
05	05	08		
Month : April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section I : Unit I – Ecological factors and Plant Communities	iii: Ecological adaptations iv: Soil pollution
05	04	09		
Month : May			Module/Unit:	Sub-units planned
05	04	09	Section I : Unit I – Ecological factors and Plant Communities	1c: Ecological Succesion 1d: Ecological Interaction

Name and Signature of Teacher
 (Dr. Annapurna. R. Alvikar)



Name and Signature of HoD
 Department of Botany
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Vivekanand College, Kolhapur (Autonomous)
 Department of Botany
 Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: **Dr. Annapurna Ram Alvikar**

Programme : **B.Sc II**

Semester: **IV**

Subject: **Botany**

Course Title: **"Plant Anatomy and Plant Metabolism"**

Month : March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
--	04	04	---	---
Month : April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
--	04	04	---	---
Month : May			Module/Unit:	Sub-units planned
--	04	04	---	---

Name and Signature of Teacher

(Dr. Annapurna. R. Alvikar)

Name and Signature of HoD

Department of Botany
 Vivekanand College
 Kolhapur



Vivekanand College, Kolhapur (Autonomous)
 Department of Botany
 Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: **Dr. Annapurna Ram Alvikar**

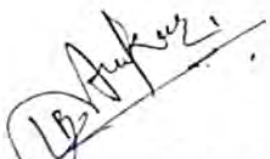
Programme : **B.Sc III**

Semester: **VI**

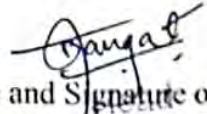
Subject: **Botany**

Course Title: **"Molecular Biology and Biotechnology"**

Month : March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section I : Unit I – Genetic Material	1a: Introduction, Nucleic acids (DNA, RNA).
04	04	08		
Month : April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section I : Unit I – Genetic Material	1b: Griffith's and Avery's transformation experiment, Harshey- Chase bacteriophage experiment 1c: DNA structure
05	04	09		
Month : May			Module/Unit:	Sub-units planned
03	04	07	Section I : Unit I – Genetic Material	1c: Types of DNA 1d: DNA replication 1e: Types of RNA


 Name and Signature of Teacher
 (Dr. Annapurna. R. Alvikar)




 Name and Signature of HoD
 Department of Botany
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 Kolhapur

Vivekanand College, Kolhapur (Autonomous)

Department of Botany

Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: **Dr. Priya Digambar Patil**

Programme: **B. Sc. I**

Semester: **I**

Subject: **Botany**

Course Title: "**Biodiversity in cryptogams and Gymnosperms**"

Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
--	04	02	--	--
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
--	04	04	--	--
Month: January			Module/Unit:	Sub-units planned
--	04	04	--	--

Name and Signature of Teacher

(*Dr. Priya D. Patil*)

Name and Signature of HoD
Head

Department of Botany
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Kolhapur

(*Dr. B.T. Dangat*)



Vivekanand College, Kolhapur (Autonomous)

Department of Botany

Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: Dr. Priya Digambar Patil

Programme: B. Sc. II

Semester: III

Subject: Botany

Course Title: "Taxonomy, Embryology and Plant Physiology"

Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals-II	Total	Section II: Unit 2: Pollination and Fertilization	Introduction, Definition, Types of pollination Mechanism of Anemophily, Entomophily and Hydrophily
04	03	05		
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit 2: Pollination and Fertilization	Mimicry in orchids Fertilization: Entry of pollen tube, Double Fertilization and triple fusion
04	04	07		
Month: January			Module/Unit:	Sub-units planned
05	04	08	Unit 2: Pollination and Fertilization	Structure and development of monocot and dicot embryo Development of endosperm, Types of endosperm-Nuclear, Helobial and cellular

Priya D. Patil

Name and Signature of Teacher

(Dr. Priya D. Patil)



B. T. Dangat (Dr. B. T. Dangat)
Name and Signature of HoD
Head

Department of Botany
Vivekanand College
Kolhapur

(37)

Vivekanand College, Kolhapur (Autonomous)

Department of Botany

Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: Dr. Priya Digambar Patil

Programme: B. Sc. II

Semester: III

Subject: Plant Protection

Course Title: "General Agriculture and Plant Pathology"

Month: October			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II: Unit 1: Crop Diseases	Introduction and importance of plant pathology, Concept of disease, Terminologies involved in plant protection, Phytoalexins and siderophores.
03	--	03		
Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit 1: Crop Diseases	Classification of plant diseases based on pathogens, symptoms, severity. Classification of plant diseases based on spread, occurrence of disease.
04	--	04		
Month: December			Module/Unit:	Sub-units planned
04	--	04	Unit 1: Crop Diseases Unit 2: Mechanism of plant infection	Classification of plant diseases based on transmission of pathogens through, host and cause. Mechanism of infection in fungi
Month: January			Module/Unit:	Sub-units planned
04	--	04	Unit 2: Mechanism of plant infection	Mechanism of infection in bacteria and virus. Factors affecting infection

Priya Patil
Name and Signature of Teacher
(Dr. Priya D. Patil)



D. B. T. Dang
Name and Signature of HoD
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Kolhapur

(38)

Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: **Dr. Priya Digambar Patil**

Programme: **B. Sc. III**

Semester: **V**

Subject: **Botany**

Course Title: **"Cytology and Research Techniques in life sciences and Microbiology, Plant Pathology and Biofertilizers"**

Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II: Unit 2: Plant Pathology	Introduction, Classification of plant diseases based on pathogens, crops and symptoms. Study of mechanism of infection in disease development
04	--	04		
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit 2: Plant Pathology	Prevention & control of plant diseases. Introduction to plant Quarantine Role of Plant Quarantine Functions & Significance of Plant Pathology
05	02	06		
Month: January			Module/Unit:	Sub-units planned
05	04	08	Section I: Unit 4: Radiation Biology	Radioactive isotopes, Introduction & examples Effect of radiations on Biological systems Beneficial effects of radiations

Name and Signature of Teacher

Priya D. Patil
(Dr. Priya D. Patil)

Name and Signature of HoD

Dangat (Dr. B. T. Dangat)
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Kolhapur



(30)

Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: Dr. Priya Digambar Patil

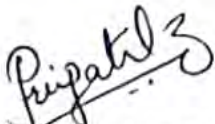
Programme: B. Sc. I


Semester: II

Subject: Botany

Course Title: "Plant Ecology and Taxonomy"

Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals-II	Total	--	--
--	04	04		
Month: April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	--	--
--	04	04		
Month: May			Module/Unit:	Sub-units planned
--	04	04	--	--


 Name and Signature of Teacher
 (Dr. Priya D. Patil)


 Name and Signature of HoD
 Head
 Department of Botany
 Vivekanand College
 Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany

Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: Dr. Priya Digambar Patil

Programme: B. Sc. II

Semester: IV

Subject: Botany

Course Title: "Taxonomy, Embryology and Plant Physiology"

Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals-II	Total	--	--
--	03	02		
Month: April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit 4: Plant adaptations	Mangroves & their adaptations
01	02	03		
Month: May			Module/Unit:	Sub-units planned
--	02	02	--	--

Priya D. Patil
Name and Signature of Teacher
(Dr. Priya D. Patil)

Dangat (Dr. B. T. Dangat)
Name and Signature of HoD
Head
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany

Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: **Dr. Priya Digambar Patil**

Programme: **B. Sc. II**

Semester: **IV**

Subject: **Plant Protection**

Course Title: **"Weed Science and Insect Pest"**

Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II: Unit 1: Introduction to insect pests	Definition and losses caused by insect pests Causes for insects to assume pest status
04	--	04		
Month: April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit 1: Introduction to insect pests	Classification of insect pest based on- a) Occurrence of pest b) Intensity of pest c) Level of infestation d) Food requirement
04	--	04		
Month: May			Module/Unit:	Sub-units planned
05	--	05	Unit 4: Recent trends in pest management	Introduction a) Attractants b) Repellents c) Antifeedants d) Pheromones e) Chemosterilants Precautionary measures used during pesticides

Priya D. Patil

Name and Signature of Teacher

(**Dr. Priya D. Patil**)



B. T. Dangal (Dr. B. T. Dangal)
Name and Signature of HoD
Head

Department of Botany
Vivekanand College
Kolhapur

(42)

Vivekanand College, Kolhapur (Autonomous)

Department of Botany

Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: Dr. Priya Digambar Patil

Programme: B. Sc. III

Semester: VI

Subject: Botany

Course Title: "Molecular Biology and Biotechnology and Horticulture, Forestry and Herbal Technology"

Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section I: Unit 4: Plant Tissue Culture	Principle and Totipotency Components of culture media, Sterilization techniques
04	03	08		
Month: April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit 4: Plant Tissue Culture	Different techniques in tissue culture. Organogenesis and Embryology
04	04	08		
Month: May			Module/Unit:	Sub-units planned
03	02	05	Unit 4: Plant Tissue Culture	Anther culture Applications of tissue culture

Priya D. Patil

Name and Signature of Teacher

(Dr. Priya D. Patil)



Dangat

Name and Signature of HoD

Head

Department of Botany
Vivekanand College
Kolhapur

(Dr. B. T. Dangat)

(43)

Vivekanand College, Kolhapur (Autonomous)
 Department of Botany
 Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Priyanka Pravin Jadhav

Programme - B. Sc. II

Semester- IV

Subject: Botany

Course Title: " Plant Anatomy and Plant Metabolism ."

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper –IV Section – I Unit	Primary structure of
05	08	13	III Primary and secondary structure of plant body	Monocotyledon and Dicotyledon root, Stem and Leaf
Month – April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Primary and secondary structure of plant body	Normal secondary growth of dicotyledon root and stem, Anomalous secondary growth of <i>Bignonia</i> and <i>Dracaena</i>
03	08	11		
Month- May			Module/Unit:	Sub-units planned
02	04	06	Primary and secondary structure of plant body	Periderm and lenticel

PPJadhav

Name and Signature of Teacher

Mangal

Name and Signature of HOD
 Head
 Department of Botany
 Vivekanand College
 Kolhapur

(46)



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Priyanka Pravin Jadhav

Programme - B. Sc. III

Semester- VI

Subject: Botany

Course Title- 1. Genetics and Plant Breeding
2. Horticulture , Forestry and Herbal Technology

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 7 G Section – I Unit - II Linkage and Crossing over	Linkage concept and History, types of Linkage, Crossing over : Concept
04	-	04		
Month – April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Linkage and Crossing over	Significance, Cytological proof of crossing over, Linkage Maps
05	-	05		
Month- May			Module/Unit:	Sub-units planned
04	-	04	Paper –XVI Section – II Unit II Gardening and Ornamental plants	Definition Objective, Types of Gardening importance and landscape garden

PP Jadhav

Name and Signature of Teacher

B. Jadhav
Name and Signature of HOD
Head
Department of Botany
Vivekanand College
Kolhapur



(45)

Vivekanand College, Kolhapur (Autonomous)
 Department of Botany
 Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Priyanka Pravin Jadhav

Programme - B. Sc. II

Semester- V

Subject: Botany

Course Title: " Plant Anatomy and Plant Metabolism ."

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Plant Anatomy and Plant Metabolism	
00	08	08		
Month - April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Plant Anatomy and Plant Metabolism	
00	08	08		
Month- May			Module/Unit:	Sub-units planned
00	04	04	Plant Anatomy and Plant Metabolism	

P. Jadhav

Name and Signature of Teacher

P. Jadhav

Name and Signature of HOD

Head
 Department of Botany
 Vivekanand College
 Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany

Academic Year: 2021-2022

Annual Teaching Plan

Name of the teacher: Dr. Priyanka Pravin Jadhav

Programme - B. Sc. III

Semester- V

Subject: Botany

Course Title: "Plant Biochemistry and stress Physiology"

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 7 E 2 Section – I Unit – I Protein metabolism	Introduction, properties and Characters of amino acids.
03	-	03		
Month - December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit – I Protein metabolism	Protein structure and Classification
04	-	04		
Month- January			Module/Unit:	Sub-units planned
-02	--	02	Unit – I Protein metabolism	Protein Synthesis

Priyanka

Name and Signature of Teacher

Sangal
Name and Signature of HOD
Head
Department of Botany
Vivekanand College,
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Shital B. Koparde

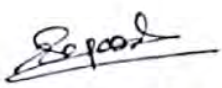
Programme - B.Sc. I

Semester- I

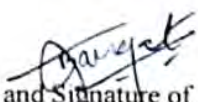
Subject: Botany

Course Title: Biodiversity in Cryptogams and Gymnosperms

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Biodiversity in Cryptogams and Gymnosperms	-
-	04	04		
Month - December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Biodiversity in Cryptogams and Gymnosperms	-
-	04	04		
Month- January			Module/Unit:	Sub-units planned
-	06	06	Biodiversity in Cryptogams and Gymnosperms	-


Dr. Shital B. Koparde

Name and Signature of Teacher


Name and Signature of HOD
(Dr. B. T. Dargat)
Head
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Shital B. Koparde

Programme - B.Sc. I

Semester- II

Subject: Botany

Course Title: Biodiversity in Cryptogams and Gymnosperms

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Biodiversity in Cryptogams and Gymnosperms	-
-	05	05		
Month - April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Biodiversity in Cryptogams and Gymnosperms	-
-	05	05		
Month- May			Module/Unit:	Sub-units planned
-	02	02	Biodiversity in Cryptogams and Gymnosperms	-

Name and Signature of Teacher

(Dr. Shital B. Koparde)

Name and Signature of HOD

(Dr. B. T. Daogad)

Head

Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Shital B. Koparde

Programme - B. Sc. II

Semester- III

Subject: Botany

Course Title: " Plant Anatomy and Plant Metabolism ."

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Plant Anatomy and Plant Metabolism	-
-	05	05		
Month - December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Plant Anatomy and Plant Metabolism	-
-	04	04		
Month- January			Module/Unit:	Sub-units planned
-	04	04	Plant Anatomy and Plant Metabolism	-

Name and Signature of Teacher

(Dr. Shital B. Koparde)

Name and Signature of HOD

(Dr. B. T. Dargat)

Head

Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Shital B. Koparde

Programme - B. Sc. II

Semester- IV

Subject: Botany

Course Title: " Plant Anatomy and Plant Metabolism ."

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper -IV Section - II Unit III Growth and Development	Defination and Phases of Growth, Plant growth regulators- Auxin, Cytokinin, Gibberellins, ABA
05	05	10		
Month - April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Growth and Development	Photoperiodism and floreign concept
03	04	07		
Month- May			Module/Unit:	Sub-units planned
02	02	04	Growth and Development	Vernalization concept and Significance

Signature

Name and Signature of Teacher

(Dr. Shital B. Koparde)

Signature

Name and Signature of HOD

(Dr. B. T. Dargut)

Head
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Shital B. Koparde

Programme - B. Sc. III

Semester- V

Subject: Botany

Course Title: "Plant Biochemistry and stress Physiology"

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 7 E 2 Section – I Unit - IV Senescence and Aging	Patterns of Senescence, Physical Changes During Senescence
03	-	03		
Month - December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Senescence and Aging	Control of Senescence
02	-	02		
Month- January			Module/Unit:	Sub-units planned
-	03	03		-

Name and Signature of Teacher

(Dr. Shital B. Koparde)

Name and Signature of HOD

(Dr. B. Heald Dargat)

Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Shital B. Koparde

Programme - B. Sc. III

Semester- VI

Subject: Botany

Course Title- Genetics and Plant Breeding

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 7 G Section – I Unit - IV Plant Breeding	Introduction and objectives, Plant genetic resources, Centers of Origin and domestication of crop plants
05	-	05		
Month – April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Plant Breeding	Methods of Plant breeding
05	-	05		
Month- May			Module/Unit:	Sub-units planned
04	-	04	Plant Breeding	Mutation breeding

Name and Signature of Teacher

(Dr. Shital B. Koparde)

Name and Signature of HOD

(Dr. B.T. Daryat)

Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany

Annual Teaching Plan

Academic Year: 2021-2022

Name of the teacher: Dr. Bhairu Nathaji Shinde


Programme: B. Sc. I

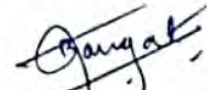
Semester: I

Subject: Botany

Course Title: "Biodiversity in cryptogams and Gymnosperms"

Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	--	--
--	04	04		
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	--	--
--	04	04		
Month: January			Module/Unit:	Sub-units planned
--	04	04	--	--


Dr. Bhairu N. Shinde
Name and Signature of Teacher


Dr. B. J. Dangat
Name and Signature of HoD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany

Annual Teaching Plan

Academic Year: **2021-2022**

Name of the teacher: **Dr. Bhairu Nathaji Shinde**


Programme: **B. Sc. II**

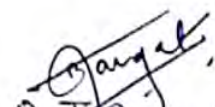
Semester: **III**

Subject: **Botany**

Course Title: **"Taxonomy, Embryology and Plant Physiology"**

Month: November			Module/Unit:	Sub-units planned
Lectures	Practicals-I,II	Total	--	--
--	07	07		
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals-I, II	Total		
--	08	08		
Month: January			Module/Unit:	Sub-units planned
Lectures	Practicals-I, II	Total	--	--
--	07	07		


Dr. B.N. Shinde
Name and Signature of Teacher


Dr. B.T. Dangat
Name and Signature of HoD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany

Academic Year: 2021-2022

Annual Teaching Plan

Name of the teacher: Dr. Bhairu Nathaji Shinde

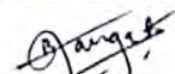
Programme - B. Sc. Semester- V

Subject: Botany Course Title: Cytology and Research Techniques in life sciences and Microbiology, Plant Pathology and Biofertilizers

Month -August			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Study of Plant Diseases	Introduction- Plant Diseases , Spices
02		02		
Month - September			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Study of Plant Diseases	Vegetable – White rust of <i>Ammaranthus</i>
04		04		
Month- October			Module/Unit:	Sub-units planned
04		04	Study of Plant families	Family- Introduction
Month- November			Module/Unit:	Sub-units planned
02		02	Study of Plant families	Anacardiaceae
Month- December			Module/Unit:	Sub-units planned
02		02	Study of Plant families	Fabaceae


Dr. B. N. Shinde
Name and Signature of Teacher




Dr. B. T. Dargach
Name and Signature of HoD
Department of Botany
Vivekanand College
Kolhapur

Note: In the above format, for each month for each teacher.

Vivekanand College, Kolhapur (Autonomous)
Department of Botany
Annual Teaching Plan

Academic Year: **2021-2022**

Name of the teacher: **Dr. Bhairu Nathaji Shinde**


Programme: **B. Sc. I**


Semester: **II**

Subject: **Botany**

Course Title: **"Biodiversity in cryptogams and Gymnosperms"**

Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals-II	Total	--	--
--	04	04		
Month: April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	--	--
--	04	04		
Month: May			Module/Unit:	Sub-units planned
--	04	04	--	--


Dr. B.N. Shinde
 Name and Signature of Teacher


Dr. B.T. Pangat
 Name and Signature of HoD
 Department of Botany
 Vivekanand College
 Kolhapur



Vivekanand College, Kolhapur (Autonomous)
Department of Botany
Annual Teaching Plan

Academic Year: **2021-2022**

Name of the teacher: **Dr. Bhairu Nathaji Shinde**

Programme: **B. Sc. II**

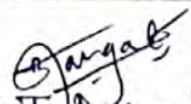
Semester: **IV**

Subject: **Botany**

Course Title: "**Plant anatomy and Plant metabolism**"

Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals-I,II	Total	Unit 4: Plant adaptations --	Xeric adaptations
02	04	06		
Month: April			Module/Unit:	Sub-units planned
Lectures	Practicals-I,II	Total	Unit 4: Plant adaptations	Carnivorous adaptations
02	04	06		
Month: May			Module/Unit:	Sub-units planned
Lectures	Practicals-I,II	Total	Unit 4: Plant adaptations	Epiphytic and Parasitic plant
02	04	06		


Dr. B.N. Shinde
 Name and Signature of Teacher


Dr. B. Hebbangal
 Name and Signature of HoD
 Department of Botany
 Vivekanand College
 Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany

Academic Year: 2021-2022

Annual Teaching Plan


Name of the teacher: Dr. Bhairu Nathaji Shinde

Programme - B. Sc. III Semester- VI

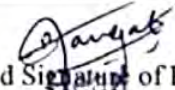
Subject: Botany Course Title: Genetics and Plant Breeding and Biostatistics, Economic Botany and Ethanobotany

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Biostatistics	Introduction, statistical terms, Sampling- Sampling methods
02		02		
Month - April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Biostatistics	Collection and representation data, Measures of central tendency- Mean, Mode and Median
04		04		
Month- May			Module/Unit:	Sub-units planned
04		04	Biostatistics	Variances and standard deviation, coefficient of variation, Test of significance, Chi- square test

Name and Signature of Teacher


Dr. B.N. Shinde

Name and Signature of HoD


Dr. B.N. Shinde
Department of Botany
Vivekanand College
Kolhapur

Note: In the above format, for each month for each teacher.



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Mrunalini N. Desai

Programme - B. Sc. III

Semester- V

Subject: Botany

Course Title: "Plant Systematic and Paleobotany"

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 7 E 2 Section – II Unit - IV Paleobotany	Types of fossils, Geological time scale
03	-	03		
Month - December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paleobotany	Enigmocarpon, Lyngiopteris
03	-	03		
Month- January			Module/Unit:	Sub-units planned
02	-	02	Paleobotany	Application and role of microfossils

Name and Signature of Teacher

(Dr. Mrunalini N. Desai)

Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Mrunalini N. Desai

Programme - B. Sc. III

Semester- VI

Subject: Botany

Course Title- Biostatistics, Economic Botany and Ethanobotany

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 1007 G Section – II Unit - II Economic botany	Cereals, legumes
03	-	03		
Month – April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Economic botany	Vegetables
03	-	03		
Month- May			Module/Unit:	Sub-units planned
03	-	03	Economic botany	Spices

Name and Signature of Teacher

(Dr. Mrunalini N. Desai)

Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Mrunalini N. Desai

Programme - B.Sc. II

Semester- III

Subject: Plant Protection

Course Title: General Agriculture and Plant pathology

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 1012C2 Section – I Unit - I Introduction of Agriculture and study of major crops	Cereals and oil seed crop
03	-	03		
Month – December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Introduction of Agriculture and study of major crops	Pulse crop
03	-	03		
Month- January			Module/Unit:	Sub-units planned
01	-	01	Introduction of Agriculture and study of major crops	Cash crops

Name and Signature of Teacher

(Dr. Mrunalini N. Desai)

Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Mrunalini N. Desai

Programme – B.Sc. II

Semester- IV

Subject: Plant Protection

Course Title: Weed Science and Insect pest

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 1011D2 Section – I Unit - IV Non Insect Pest and house hold pest	Nematodes
02	-	02		Birds
Month – April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Non Insect Pest and house hold pest	Rats
02	-	02		Snails
Month- May			Module/Unit:	Sub-units planned
02	-	02	Non Insect Pest and house hold pest	Drosophila Housefly Mosquito

Name and Signature of Teacher

(Dr. Mrunalini N. Desai)

Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Mrunalini N. Desai

Programme - B. Sc. II

Semester- III

Subject: Botany

Course Title: " Plant Anatomy and Plant Metabolism ."

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Plant Anatomy and Plant Metabolism	
-	10	10		
Month - December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Plant Anatomy and Plant Metabolism	
-	10	10		
Month- January			Module/Unit:	Sub-units planned
-	08	08	Plant Anatomy and Plant Metabolism	

Name and Signature of Teacher

(Dr. Mrunalini N. Desai)

Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Mrunalini N. Desai

Programme - B. Sc. II

Semester- IV

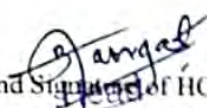
Subject: Botany

Course Title: " Plant Anatomy and Plant Metabolism ."

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – IV Section – I Unit – II Tissue and tissue system	Meristem Apical cell theory Histogen Theory Tunica corpus theory
05	07	12		
Month – April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Tissue and tissue system	Permenent tissue Types of vascular bundle
05	07	12		
Month- May			Module/Unit:	Sub-units planned
02	06	08	Tissue and tissue system	Epidermal, Secretory and mechanical tissue system


Name and Signature of Teacher

(Dr. Mrunalini N. Desai)


Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Dr. Mrunalini N. Desai

Programme - B. Sc. I

Semester- I

Subject: Botany

Course Title: " Biodiversity in cryptogams and Gymnosperms "

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper -I Biodiversity in cryptogams and Gymnosperms	
-	04	04		
Month - April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Biodiversity in cryptogams and Gymnosperms	
-	04	04		
Month- May			Module/Unit:	Sub-units planned
-	05	05	Biodiversity in cryptogams and Gymnosperms	

Name and Signature of Teacher

(Dr. Mrunalini N. Desai)

Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Dr. Mrunalini N. Desai


Programme - B. Sc. I

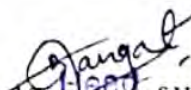
Semester- II

Subject: Botany

Course Title: " Biodiversity in cryptogams and Gymnosperms "

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper -I Biodiversity in cryptogams and Gymnosperms	
-	04	04		
Month - April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Biodiversity in cryptogams and Gymnosperms	
-	04	04		
Month- May			Module/Unit:	Sub-units planned
-	05	05	Biodiversity in cryptogams and Gymnosperms	


Name and Signature of Teacher
(Dr. Mrunalini N. Desai)


Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Lubdha Abhijeet Kagale

Programme - B. Sc. III

Semester- V

Subject: Botany

Course Title: "Microbiology, Plant Pathology and Biofertilizers/
Plant Systematic and Paleobotany"

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 7 E 2 Section – II Unit - I Microbiology	Patterns of Senescence, Methods and Microorganisms in biological world
06	-	06		
Month - December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Microbiology and Importance of Plant Systematics	Scope of microbes in industry, Plant systematics introduction, Herbarium
06	-	06		
Month- January			Module/Unit:	Sub-units planned
08	-	08	Importance of Plant Systematic	Functions of botanical garden, Evidences from Palynology, Cytology, Molecular data and phytochemistry

L. Kagale

Name and Signature of Teacher

Dr. Lubdha A. Kagale



L. Kagale
Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur

Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Lubdha Abhijeet Kagale

Programme - B. Sc. III

Semester- VI

Subject: Botany

Course Title- Biostatistics, Economic Botany and Ethnobotany

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 1007 G Section – II Unit - IV Ethnobotany	Introduction and objectives, Data collection, Herbarium, Field work,
04	-	04		
Month – April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Ethnobotany	Role of ethnobotany in modern medicine, Ancient literature, Sacred groves
04	-	04		
Month- May			Module/Unit:	Sub-units planned
05	-	05	Ethanobotany and Herbal technology	Archaeological findings, Pharmacognosy, Phytochemicals

Kagale

Name and Signature of Teacher

Dr. Lubdha A. Kagale

Name and Signature of HOD

Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Lubdha Abhijeet Kagale

Programme - B.Sc. II

Semester- III

Subject: Plant Protection

Course Title: General Agriculture and Plant pathology

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 1012C2 Section – II Unit - I Crop diseases	Isolation, Inoculation and pure culture of fungi and Bacteria
03	04	07		
Month – December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section – II Unit - IV Management of crop diseases and Pathophysiological skills	Principles, Classification of fungicides on chemical nature, Mode of action
03	04	07		
Month- January			Module/Unit:	Sub-units planned
03	05	08	Management of crop diseases and Pathophysiological skills	Fungicide formulation, mode of action, Chemical nature and properties of Carbendazim and COC

Kagale

Name and Signature of Teacher

Dr. Lubdha A. Kagale



Gangad
Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur

Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Lubdha Abhijeet Kagale

Programme – B.Sc. II

Semester- IV

Subject: Plant Protection

Course Title: Weed Science and Insect pest

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 1011D2 Section – II Unit - III Management of Insect Pest	Principal of insect pest control, classification best on of entry
04	05	09		
Month – April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Management of Insect Pest	Systemic insecticide and fumigants, mode of action and chemical nature
04	05	09		
Month- May			Module/Unit:	Sub-units planned
02	04	06	Management of Insect Pest	Plant origin insecticides, Nature of formulations

Kagale

Name and Signature of Teacher

Dr. Lubdha A. Kagale

Kagale
Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Lubdha Abhijeet Kagale

Programme - B. Sc. II

Semester- III

Subject: Botany

Course Title: " Plant Anatomy and Plant Metabolism"

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper –III Section – II Unit II	Criteria of essentiality, Macro and Micro elements
03	05	05	Mineral Nutrition	
Month – December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Mineral Nutrition	Active and Passive uptake
02	04	04		
Month- January			Module/Unit:	Sub-units planned
02	04	04	Mineral Nutrition	Role and deficiency of mineral elements

L. Kagale

Name and Signature of Teacher

Dr. Lubdha A. Kagale

A. Anagat
Name and Signature of HOD

Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Lubdha Abhijeet Kagale

Programme - B. Sc. II

Semester- IV

Subject: Botany

Course Title: " Plant Anatomy and Plant Metabolism "

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper -IV Section - II Unit III	
-	04	04	Plant Anatomy	
Month - April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
-	04	04	Plant Anatomy	
Month- May			Module/Unit:	Sub-units planned
-	02	02	Plant Anatomy	

Kagale

Name and Signature of Teacher

Dr. Lubdha A. Kagale

Jangal
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Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Lubdha Abhijeet Kagale

Programme - B. Sc. I

Semester- I

Subject: Botany

Course Title: " Biodiversity in cryptogams and Gymnosperms "

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper -I Biodiversity in cryptogams and Gymnosperms	
-	04	04		
Month - April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Biodiversity in cryptogams and Gymnosperms	
-	04	04		
Month- May			Module/Unit:	Sub-units planned
-	02	02	Biodiversity in cryptogams and Gymnosperms	

Kagale

Name and Signature of Teacher

Dr. Lubdha A. Kagale

Jangal
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Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Sarika Dipak Patil

Programme - B. Sc. III

Semester- V

Subject: Botany

Course Title: "Plant Biochemistry and Stress physiology"

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 7 E 2 Section – I Unit - III Stress physiology	Definition of plant stress, Types of stress
03	-	03		
Month - December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Stress physiology	Water and salinity stress, light and temperature stress
03	-	03		
Month- January			Module/Unit:	Sub-units planned
02	-	02	Stress physiology	Stress sensing mechanism, calcium modulation and signaling

(Dr. Sarika D. Patil.)

Name and Signature of Teacher

Name and Signature of HOD
Dr. Jayant
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Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Sarika Dipak Patil

Programme - B. Sc. III

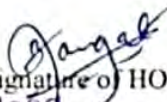
Semester- VI

Subject: Botany

Course Title- Genetics and Plant breeding

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 1007 G Section – I Unit - I Heridity	Introduction and Terminologies
03	-	03		
Month – April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Heridity	Laws of inheritance
03	-	03		
Month- May			Module/Unit:	Sub-units planned
03	-	03	Heridity	Multiple allelism


(Dr. Sarika D. Patil.)
Name and Signature of Teacher


Name and Signature of HOD
Dr. B. T. D. Botany
Head
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Sarika Dipak Patil

Programme - B.Sc. II

Semester- III

Subject: Plant Protection

Course Title: General Agriculture and Plant pathology

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 1012C2 Section – II Unit - III Plant diseases	Phytoplasmal diseases
04	-	04		Viral diseases
Month – December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Plant diseases	Bacterial diseases
04	-	04		
Month- January			Module/Unit:	Sub-units planned
04	-	04	Plant diseases	Fungal diseases

(Dr. Sarika D. Patil.)

Name and Signature of Teacher

Name and Signature of HOD,
Department of Botany
Dr. B. T. Dhangar
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Sarika Dipak Patil

Programme – B.Sc. II

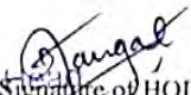
Semester- IV

Subject: Plant Protection

Course Title: Weed Science and Insect pest

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 1011D2 Section – I Unit - I Introduction of Weeds	Harmful and beneficial effect of weed, poisonous and noxious weeds
02	-	02		
Month – April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Introduction of Weeds	Characteristics of weed, Parasitic and aquatic weed
02	-	02		
Month- May			Module/Unit:	Sub-units planned
02	-	02	Introduction of Weeds	Classification of weeds, weed biology of weed, and ecology


Name and Signature of Teacher
(Dr. Sarika D. Patil.)


Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Sarika Dipak Patil

Programme - B. Sc. II

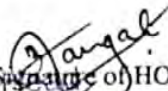
Semester- III

Subject: Botany

Course Title: " Plant Physiology"

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper -III Section - II Unit III	Ultrastructure of photosynthetic apparatus, photosynthetic pigments
03	10	13	Photosynthesis	
Month - December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Photosynthesis	Mechanism of photosynthesis
02	07	09		
Month- January			Module/Unit:	Sub-units planned
03	07	10	Photosynthesis	Significance of photosynthesis


(Dr. Sarika D. Patil.)
Name and Signature of Teacher


Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Sarika Dipak Patil

Programme - B. Sc. II

Semester- IV

Subject: Botany

Course Title: " Plant Anatomy and Plant Metabolism "

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper -IV Section - II Unit III	
-	10	10	Plant Anatomy	
Month - April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Plant Anatomy	
-	07	07		
Month- May			Module/Unit:	Sub-units planned
-	07	07	Plant Anatomy	

(Dr. Sarika D. Patil.)

Name and Signature of Teacher

Name and Signature of HOD

Dr. B. M. D. Patil
Department of Botany,
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Sarika Dipak Patil

Programme - B. Sc. I

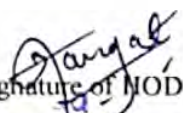
Semester- I

Subject: Botany

Course Title: " Biodiversity in cryptogams and Gymnosperms "

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper -I	
-	10	10	Biodiversity in cryptogams and Gymnosperms	
Month - April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Biodiversity in cryptogams and Gymnosperms	
-	10	10		
Month- May			Module/Unit:	Sub-units planned
-	06	06	Biodiversity in cryptogams and Gymnosperms	


(Dr. Sarika D. Patil.)
Name and Signature of Teacher


Name and Signature of MOD
Dr. B. T. Patil
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: Dr. Sarika Dipak Patil


Programme - B. Sc. I

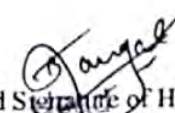
Semester- II

Subject: Botany

Course Title: " Biodiversity in cryptogams and Gymnosperms "

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper -I	
-	10	10	Biodiversity in cryptogams and Gymnosperms	
Month - April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Biodiversity in cryptogams and Gymnosperms	
-	10	10		
Month- May			Module/Unit:	Sub-units planned
-	06	06	Biodiversity in cryptogams and Gymnosperms	


CDr. Sarika D. Patil.)
Name and Signature of Teacher


Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year 2021-2022
Annual Teaching Plan

Name of the teacher: **Dr. Ketaki Prakash Patil**

Programme - B. Sc. I

Semester- I

Subject: Botany

Course Title: " Biodiversity in microbes, algae and fungi "

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	DSC 1007 A Paper I- Unit -I I. Biodiversity in microbes	Microbes- Viruses- DNA virus, RNA virus
05	04	09	DSC 1007 B Paper II- Unit -II Gymnosperms	General characters, classification and economic importance
Month - April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Biodiversity in microbes	Bacteria- Types and reproduction
05	04	09	Gymnosperms	Morphology, Anatomy and life cycles
Month- May			Module/Unit:	Sub-units planned
04	02	06	Biodiversity in microbes	Economic importance of bacteria and viruses
			Gymnosperms	Evolutionary significance of gymnosperms

Name and Signature of Teacher

Patil

Name and Signature of MOD

Department of Botany
Vivekanand College
Kolhapur

Dr. B. T. Dangat

Dangat



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: **Dr. Ketaki Prakash Patil**

Programme - B. Sc. I

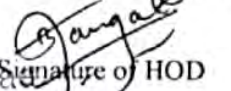
Semester- II

Subject: Botany

Course Title: "Plant Ecology"

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper III: DSC1007C Ecosystem and Phytogeography	Ecosystem introduction composition and type
05	04	09		
Month - April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Ecosystem and Phytogeography	Terrestrial ecosystem and their types
05	04	09		
Month- May			Module/Unit:	Sub-units planned
05	02	07	Ecosystem and Phytogeography	Phytogeographical regions of India


Name and Signature of Teacher

Dr. B. T. Dangat

Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: **Dr. Ketaki Prakash Patil**

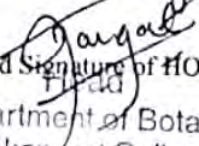
Programme - B. Sc. II

Semester- III

Subject: Botany Course Title: " PlaTaxonomy, Embryology and plant physiology

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper -III Section - I Unit IV Plant Families	Annonaceae
03	05	05		Meliaceae
Month - December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Plant Families	Apocynaceae
02	04	04		Lamiaceae
Month- January			Module/Unit:	Sub-units planned
02	04	04	Plant Families	Amaranthaceae Orchidaceae


Name and Signature of Teacher

Dr. B. T. Dangat

Name and Signature of HOD
Department of Botany
Vivekanand College



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: **Dr. Ketaki Prakash Patil**

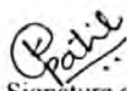
Programme - B. Sc. II

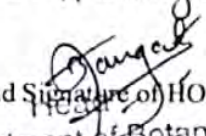
Semester- IV

Subject: Botany

Course Title: " Plant Anatomy and Plant Metabolism "

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper -IV Section - II Unit III Plant Anatomy	
-	04	04		
Month - April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Plant Anatomy	
-	04	04		
Month- May			Module/Unit:	Sub-units planned
-	02	02	Plant Anatomy	


Name and Signature of Teacher
Dr. K. P. Patil

Dr. B. T. Dangate

Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur



Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: **Dr. Ketaki Prakash Patil**

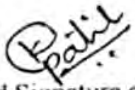
Programme - B. Sc. III

Semester- V

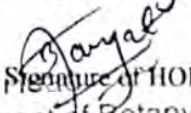
Subject: Botany Course Title: "Cytology and Research in life sciences and Microbiology

Plant pathology and Biofertilizers"

Month - November			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 7 E 1 Section – I Unit – I Cell is unit of life	1a. The cell theory, prokaryotic and eukaryotic, cell size and shape, eukaryotic cell components
05	03	08		
Month - December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Cell is unit of life Radiation Biology	1b. Cell membrane and cell wall 1c. The functions of membranes, models of membrane structure 4d. Autoradiography techniques 4e. Geiger-Muller experiment/ Liquid Scintillator
04	03	07		
Month- January			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Cell is unit of life Radiation Biology	1d. The fluidity of membranes, membrane protein and their functions, faces of the membrane, selective permeability of the membrane cell wall 4f. Precautionary Measures
04	04	08		


Name and Signature of Teacher
Dr. K. P. Patil



Dr. B. T. Dangat

Name and Signature of HOD
Department of Botany
Vivekanand College
Kolhapur

Vivekanand College, Kolhapur (Autonomous)

Department of Botany
Academic Year: 2021-2022
Annual Teaching Plan

Name of the teacher: **Dr. Ketaki Prakash Patil**

Programme - B. Sc. III

Semester- VI

Subject: Botany

Course Title- Molecular biology and Biotechnology

Month - March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper – DSC 1007 G Section – I Unit – III Genetic Engineering	Introduction, Methods of gene transfer, Agrobacterium mediated, direct gene transfer
04	06	04		
Month – April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Genetic Engineering	Transgenic plants- Bt cotton and golden rice, Application of genetic transformation
04	06	04		
Month- May			Module/Unit:	Sub-units planned
05	06	05	Genetic Engineering	Blotting techniques

Name and Signature of Teacher

Dr. K. P. Patil

Dr. B. T. Dangal

Name and Signature of HOD

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