



"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

**2020-2021**

Annual Teaching Plan 2020-2021

Department of Botany

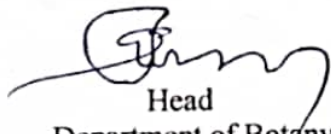


Shri Swami Vivekanand Shikshan Sanstha's  
**VIVEKANAND COLLEGE, KOLHAPUR. (Autonomous)**  
**Department of Botany**

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**Annual Teaching Plan**  
**(2020-21)**

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Head  
Department of Botany  
Head  
Department of Botany  
Vivekanand College  
Kolhapur



  
PRINCIPAL  
Vivekanand College  
Kolhapur.

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

Academic Year: 2020-2021

Name of the teacher: Prof. S. P. Salokhe

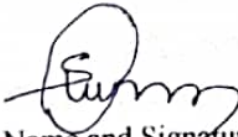
Programme: B. Sc. II

Semester: III

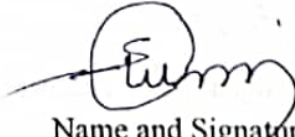
Subject: Botany

Course Title: Economic Botany

Month: June			Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit III: Primary & Secondary Structure of plant body	Primary structure of monocot & Dicot root, stem & leaf
02	--	02		
Month: July			Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit III: Primary & Secondary Structure of plant body	Anomalous secondary growth
04	--	04		
Month: August			Module/Unit:	Sub-units planned
03	--	03	Unit III: Primary & Secondary Structure of plant body	Periderm & lenticels

  
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Head  
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Name and Signature of HoD  
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Vivekanand College  
Kolhapur

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

Academic Year: **2020-2021**

Name of the teacher: **Prof. S. P. Salokhe**

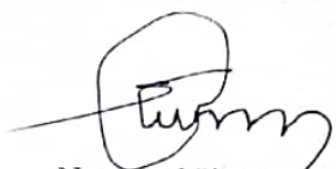
Programme: **B. Sc. III**

Semester: **V**

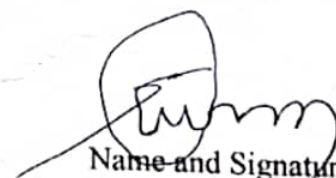
Subject: **Botany**

Course Title: **Economic Botany**

Month: June			Module/Unit:	Sub-units planned
Lectures	Practical	Total	Section II: <b>Unit II: Economic Botany I</b>	Introduction, Cereals: Legumes, Vegetables, spices
02	--	02		
Month: July			Module/Unit:	Sub-units planned
Lectures	Practical	Total	<b>Unit III: Economic Botany II</b>	Beverages, Fiber yielding Plants,
04	--	04		
Month: August			Module/Unit:	Sub-units planned
03	--	03	<b>Unit III: Economic Botany II</b>	Oil yielding Plants, dye

  
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Department of Botany  
Annual Teaching Plan

Academic Year: 2020-2021

Name of the teacher: Prof. S. P. Salokhe


Programme: B. Sc. II

Semester: III

Subject: Botany/ Plant protection

Course Title: Study of Dicot & Monocot Weeds

Month: June			Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit II: Study of Dicot & Monocot Weeds	<i>Argemone Mexicana</i> <i>Parthenum hysterophorus</i> <i>Amaranthus spinosus</i>
02	--	02		
Month: July			Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit II: Study of Dicot & Monocot Weeds	<i>Alternanthera sessilis</i> <i>Euphorbia species</i> <i>Portulaca oleraceae</i>
04	--	04		
Month: August			Module/Unit:	Sub-units planned
03	--	03	Unit II: Study of Dicot & Monocot Weeds	<i>Cyperus rotundus</i> <i>Cynodon dactylon</i>

  
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Kolhapur


### Annual Teaching Plan

Academic Year: 2020-2021 Semester: II Department: Botany

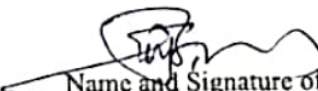
Subject: Botany, Plant Protection Course Title: .....

Name of the teacher: Dr. Abhijeet R. Kasarkar

Month <u>March</u>			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total		
I 04	—	04	BSc-I Unit 1 - Angiosperm Taxonomy	1a - Salient features 1b - Importance
II 04	—	04	BSc-II Unit 4 Seed Formancy and Germination	4a - Concept 4b - Methods 3a - Mechanical methods
III PP 04	04	08	BSc-II Unit 3 Methods of weed management (PP)	1a - Introduction 1b - Methods of Propagation
III 04	08	12	BSc-III Unit 1 Horticulture	
Month <u>April</u>			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total		
I 03	—	03	BSc-I Unit 1	1b - Function 1c - ICBN
II 03	—	03	BSc-II Unit 4	4c - seed germination 4d - Factors affecting on seed germination
III PP 03	04	07	BSc-II Unit 3 (PP)	3b - chemical methods 3d - weedicides
III 03	08	11	BSc-III - Unit 1 Unit 2 Gardening and Ornamental Plants	1c - Plant Nursery 2a - Gardening
Month <u>May</u>			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total		
I 04	—	04	BSc-I Unit 1	1d - Bertham and Hookers system
II 04	—	04	BSc-II Unit 2 Nitrogen metabolism	1e - Family 2a - Introduction
III PP 04	—	04	<del>Unit</del> BSc-II Unit 4 - Non insect Pest (PP)	2b - Biological N <sub>2</sub> fix.
III 04	08	12	BSc-III - Unit 2.	3d, 4c, 4d 2b

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



  
Name and Signature of HoD  
Head  
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### Annual Teaching Plan

Academic Year: 2020-2021 Semester: II Department: Botany


Subject: Botany Plant Protection Course Title: .....

Name of the teacher: Dr. Abhijeet R. Kasarkar

Month <u>June</u>			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total		
I 01	-	01	Bsc-I Unit-1	1e Family
II 01	-	01	Bsc II Unit 2	2b N <sub>2</sub> -Fixation Nif gene
II PP 01	-	01	Bsc II Unit 4 PP	4d
III -	-	00		
Month .....			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total		
Month .....			Module/Unit:	Sub-units planned

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



  
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### Annual Teaching Plan

Academic Year- 2020-21

Semester- I

Department- Botany

Subject- Botany

Course Name- B. Sc. I

Name of the Teacher- Dr. Jyoti M. Gorule

Month- October and November			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
3	-	3	Bryophytes	General characters, Adaptation to land habit,
Month- December and January			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
4	-	4	Bryophytes	Classification (As per G. M. Smith) upto class, Alternation of Generation, Economic importance.
Month- February and March			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
5	-	5	Bryophytes	Morphology, Anatomy and Life Cycle (Excluding developmental stages) Hepaticopsida - Riccia Anthocerotopsida- Anthoceros.

Name and Signature of The Teacher

[Dr. Jyoti M. Gorule]

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## Annual Teaching Plan

Academic Year- 2020-21

Semester- II

Department- Botany

Subject- Botany

Course Name- B. Sc. I

Name of the Teacher- Dr. Jyoti M. Gorule

Month- May			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
4	-	4	Morphology and modifications in Angiosperms	Morphology and modification of Root
Month- June and July			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
5	-	5	Morphology and modifications in Angiosperms	Morphology and modification of Stem.
Month- August and September			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
5	-	5	Morphology and modifications in Angiosperms	Morphology and modification of Leaf

Name and Signature of The Teacher

[Dr. Jyoti M. Gorule]

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Kolhapur



## Annual Teaching Plan

Academic Year- 2020-21

Semester- III

Department- Botany

Subject- Plant- Protection

Course Name- B. Sc. II

Name of the Teacher- Dr. Jyoti M. Gorule

Month- May			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
4	4	8	Study of insect pests Practical II	Jowar – Stem borer Sugarcane – White grub Gram – Pod borer
Month- June and July			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
5	7	12	Study of insect pests Practical II	Mango – Hoppers Brinjal – Fruit borer Rose – Bud borer
Month- August and September			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
3	4	7	Study of insect pests Practical I	Rice weevil Pulse beetle

Name and Signature of The Teacher

[Dr. Jyoti M. Gorule]

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## Annual Teaching Plan

Academic Year- 2020-21

Semester- IV

Department- Botany

Subject- Plant- Protection

Course Name- B. Sc. II

Name of the Teacher- Dr. Jyoti M. Gorule

Month- October and November			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
3	3	6	Methods of Plant Protection part -I  Practical II	Cultural methods – Tillage, crop rotation, trap crops, fertilizer applications Mechanical methods – Field sanitation, Hand picking,
Month- December and January			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
4	4	8	Methods of Plant Protection part -I  Practical II	Destruction of infected plants / plant parts, Destruction of egg masses, light traps, use of sticky bands, bagging for the pests. Physical methods – Heat and soil solarisation
Month- February and March			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
4	4	8	Advanced Agricultural practices with reference to concept and applications.  Practical II	Organic Farming Transgenic methods ( Agrobacterium mediated gene transfer ), Examples of Transgenic crops.

*JM Gorule*

Name and Signature of The Teacher

[ Dr. Jyoti M. Gorule ]



*S. S. ...*

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Department of Botany  
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## Annual Teaching Plan

Academic Year- 2020-21

Semester-V

Department- Botany

Subject- Botany

Course Name- B. Sc. III

Name of the Teacher- Dr. Jyoti M. Gorule

Month- October and November			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
3	3	6	Lipid Metabolism Practical I	Introduction and classification of lipids.
Month- December and January			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
2	3	5	Lipid Metabolism Practical I	Properties of saturated fatty acids (Stearic and Palmitic acid), and unsaturated fatty acids (Linoleic and Linolenic acid).
Month- February and March			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
5	4	9	Lipid Metabolism Practical I	Beta Oxidation. Gluconeogenesis and its role in mobilization of fatty acids during germination. Significance of lipids
Month- April			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
3	2	5	Biofertilizer Practical I	4a: Microbes in Agriculture –Biological Nitrogen Fixation, Mycorrhizae.

Name and Signature of The Teacher

[Dr. Jyoti M. Gorule]



Name and Signature of the HoD

Department of Botany  
Vivekanand College  
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## Annual Teaching Plan

Academic Year- 2020-21

Semester-VI

Department- Botany

Subject- Botany

Course Name- B. Sc. III

Name of the Teacher- Dr. Jyoti M. Gorule

Month- May			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
5	4	9	Recombinant DNA Technology.  Practical I	Introduction and Principle Enzymes involved in recombinant DNA technology Cloning Vectors (Plasmid, Bacteriophage and Cosmids)
Month- June and July			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
6	6	12	Recombinant DNA Technology. Forestry  Practical I	Gene Amplification: PCR technique Introduction, Forest types of India Wild life and Biosphere reserves Social and Agricultural Forestry
Month- August and September			Module/Unit	Sub-units Planned
Lectures	Practicals	Total		
4	3	7	Forestry  Practical I	Forest research education and Training institutions Forest Acts Different Plant as a forest products

*Jyoti M. Gorule*

Name and Signature of The Teacher

[ Dr. Jyoti M. Gorule ]



*[Signature]*

Name and Signature of the HoD

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

Academic Year: 2020-2021

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


Programme : **B. Sc I**

Semester: **I**

Subject: **Botany**

Course Title: **“Bryophytes, Pteridophytes and Gymnosperms”**

Month : July			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	--	03		
Month : August			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 : September			Module/Unit:	Sub-units planned
03	04	07	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  
 Head  
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**Vivekanand College, Kolhapur (Autonomous)**  
 Department of Botany  
 Annual Teaching Plan

Academic Year: 2020-2021

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


Programme: **B. Sc I**

Semester: **II**

Subject: **Botany**

Course Title: **"Plant Ecology"**

Month – April			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.
04	01	05		
Month : May			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section I : Unit I – Ecological factors and Plant Communities	ii : Climatic factors iii: Ecological adaptations iv: Soil pollution
04	04	08		
Month : June			Module/Unit:	Sub-units planned
03	03	06	Section I : Unit I – Ecological factors and Plant Communities	1c: Ecological Suceesion 1d: Ecological Interaction

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



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

Academic Year: 2020-2021

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

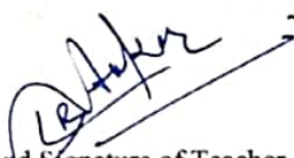
Programme: **B. Sc II**

Semester: **IV**


Subject: **Botany**

Course Title: **"Plant Physiology"**

Month : April			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
02	--	02	Section II : Unit III : Plant Water Relationship	3a: Introduction: 3b: water transport process
Month : May			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
03	--	03	Section II : Unit III : Plant Water Relationship,  Tissue and Tissue system	3c: Mechanism of water absorption  Introduction: Meristems
Month : June			Module/Unit:	Sub-units planned
06	02	08	Section-I Unit-II Tissue and Tissue system	Theories of structural development ETS, MTS and STS.

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



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

Academic Year: 2020-2021

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


Programme : **B. Sc II**

Semester: **IV**

Subject: **Botany**

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

Month : July			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section-I Unit-II Tissue and Tissue system  Photo-periodism Vernalisation	Types of vascular bundles  Photoperiodism and Foreign concept, LDP,SDP,DNP
04	04	08		
Month : August			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Photo-periodism and Vernalisation	Vernalization concept
02	03	05		

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



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

Academic Year: 2020-2021

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

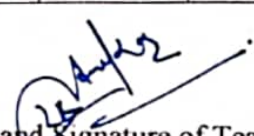
Programme : **B. Sc III**

Semester: **VI**

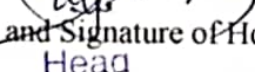
Subject: **Botany**

Course Title: **“Molecular Biology and Biotechnology”**

Month : May			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section I : Unit I – Genetic Material	1a: Introduction, Nucleic acids (DNA, RNA). Griffith's and Avery's transformation experiment
03	01	04		
Month : June			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section I : Mutation and Unit I – Genetic Material	Introduction, Mutation breeding examples and DNA structure, types of DNA
06	04	10		
Month : July			Module/Unit:	Sub-units planned
02	03	05	Section I : Unit I – Genetic Material	DNA replication, Types of RNA

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



  
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## Annual Teaching Plan

Academic Year: 2020-2021

Semester: V

Department: Botany

Subject: Botany (Theory)

Course Title: B.Sc.

Name of the teacher: Dr. Priya Digambar Patil

Month: Nov.- December			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.
5	--	5		
Month : January			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit 2: Plant Pathology	Prevention and control of plant diseases.  Introduction to Plant Quarantine. Role of plant quarantine, Functions and Significance of plant pathology
4	--	4		
Month: February			Module/Unit:	Sub-units planned
3	--	3	Section I: Unit 4: Radiation Biology	Radioactive isotopes, Effect of radiations on Biological systems
Month : March			Module/Unit:	Sub-units planned
2	--	2	Unit 4: Radiation Biology	Beneficial effects of radiations

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



*[Signature]*  
Name and Signature of HoD  
Head  
Department of Botany  
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## Annual Teaching Plan

Academic Year: **2020-2021**

Semester: **VI**

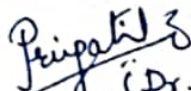
Department: **Botany**

Subject: **Botany** (Theory)

Course Title: **B.Sc.**

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

Month: April-May			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	DSC 7 H Section I:  Unit 4: Plant Tissue Culture	Principle and Totipotency, Components of culture media, Sterilization techniques, Techniques in tissue culture: Callus culture, Cell suspension culture
6	-	6		
Month : June			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit 4: Plant Tissue Culture   DSC 7 G Section I: Unit 2: Linkage and Crossing over	Organogenesis, Embryogenesis, Anther culture, Applications of plant tissue culture.   Linkage: Concept and History, Types of linkages
5	-	5		
Month: July			Module/Unit:	Sub-units planned
4	-	4	Unit 2: Linkage and Crossing over	Crossing over: Concept and significance.  Cytological proof of crossing over, Linkage maps

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



  
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## Annual Teaching Plan

Academic Year: 2020-2021

Semester: III

Department: Botany

Subject: Botany (Theory)

Course Title: B.Sc.

Name of the teacher: Dr. Priya Digambar Patil

Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	DSC 7 C Section II: Unit 2: Pollination and Fertilization	Definition, Types of pollination, Mechanism in Aemophily, Entomophily and Hydrophily
4	--	4		
Month : January			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
3	--	3		
Month: February			Module/Unit:	Sub-units planned
2	--	2	Unit 2: Pollination and Fertilization	Structure of monocot and dicot embryo

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



*[Signature]*  
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 Head  
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 Kolhapur

## Annual Teaching Plan

Academic Year: 2020-2021

Semester: IV

Department: **Botany**

Subject: **Botany (Theory)**

Course Title: **B.Sc.**

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

Month: May			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	DSC 7 D Section II: Unit 1: Enzymes	Introduction, Chemical nature and properties of enzymes, Classification of enzymes, Nomenclature of enzymes
5	--	5		
Month : June			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	DSC 7 D Section I: Unit 4: Plant adaptations	Mangrove Biology Xeric adaptations
4	--	4		
Month: July			Module/Unit:	Sub-units planned
4	--	4	Unit 4: Plant adaptations	Carnivorous plants Epiphytic and Parasitic Plants

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



*[Signature]*  
Name and Signature of HoD

Head  
Department of Botany  
Vivekanand College  
Kolhanur

## Annual Teaching Plan

Academic Year: 2020-2021

Semester: III

Department: Botany

Subject: Plant Protection (Theory)

Course Title: B.Sc.

Name of the teacher: Dr. Priya Digambar Patil

Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II: Plant Pathology  Unit I: Crop diseases	Introduction and importance of plant pathology, Concept of disease, Terminologies involved in plant protection, Phytoalexins and Siderophores.
2	--	2		
Month :January			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, transmission of pathogens through, host and cause.  Assignment
4	--	4		
Month: February			Module/Unit:	Sub-units planned
4	--	4	Unit 2: Mechanism of infection	Mechanism of infection in Fungi, bacteria and virus.  Factors affecting infection

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



*[Signature]*  
 Name and Signature of HoD  
 Head  
 Department of Botany  
 Vivekanand College  
 Kolhapur

## Annual Teaching Plan

Academic Year: 2019-2020

Semester: IV

Department: Botany

Subject: Plant Protection (Theory)

Course Title: B.Sc.

Name of the teacher: Dr. Priya Digambar Patil

Month: Nov.-December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II: Insect pest  Unit 1: Introduction to insect pest	Definition and losses caused by insect pests.  Causes for insects to assume pest status.
4	--	4		
Month :January			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit 1: Introduction to insect pest	Classification of insect pest based on- a) Occurrence of pest b) Intensity of pest c) Level of infestation d) Food requirement.
4	--	4		
Month: February			Module/Unit:	Sub-units planned
3	--	3	Unit 4: Recent trends in pest management	Attractants, Repellents, Antifeedants, Pheromones, Chemosterilents
Month: March			Module/Unit:	Sub-units planned
2	--	2	Unit 4: Recent trends in pest management	Precautionary measures used during pesticide application

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



*[Signature]*  
Name and Signature of HoD  
Head  
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Vivekanand College  
Kolhapur



Annual Teaching Plan

Academic Year: 2020-21 Semester: Department: Botany

Subject: Botany Course Title: B.Sc. I and II (Sem III)

Name of the teacher: Dr. Lubdha Abhijeet Kagale

Month NOV. & Dec....			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	B.Sc. I- Practical section-II Plant Metabolism Unit-II - Mineral Nutrition	Introduction, criteria of essentiality
3	3	6		
Month Jan. & Feb....			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	Mineral Nutrition	Macro and micro element Role of macronutrients
2	2	4		
Month Mar. & April...			Module/Unit:	Sub-units planned
3	+	3	Mineral Nutrition	Deficiencies of macronutrient - Passive uptake Active uptake.

L. Kagale  
Name and Signature of Teacher  
Dr. Lubdha A. Kagale



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Head  
Department of Botany  
Vivekanand College  
Kolhapur

Annual Teaching Plan

Academic Year: 2020-21 Semester: III & IV Department: Botany

Subject: Botany & Course Title: B.Sc. II

Name of the teacher: Dr. Lubdha Abhijeet Kagale

Month .. July.. & August			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	Section-II Plant Metabolism Unit-3 - Growth and development Practical-II (6)	Defination, Phases of growth, Plant growth regulators
6		6		
Month .. Dec. & Jan...			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	Unit-I Crop diseases	Kochs Postulates Symptoms and Signs of Plant diseases
4		4		
Month .. Feb..... Mar.....			Module/Unit:	Sub-units planned
2		2	crop diseases	Isolation of Fungi and Bacteria

Kagale  
Name and Signature of Teacher  
Dr. Lubdha A. Kagale



[Signature]  
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Head  
Department of Botany  
Vivekanand College  
Kolhapur

Annual Teaching Plan

Academic Year: 2020-21

Semester: IV

Department: Botany

Subject: Plant Protection Course Title: B.Sc. II

Name of the teacher: Dr. Lubdha Abhijeet Kagale

Month ... March .....			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	Section-II Unit III - Management of Insect Pest	Principle of Insect Pest control
3		3		
Month ... April .....			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	Unit-3. Management of Insect Pest	Classification of Insecticides mode of entry mode of action Nature of formulation
4		4		
Month ... May .....			Module/Unit:	Sub-units planned
4		4	Management of Insect Pest	Inorganic & Organic insecticide Plant origin insecticide Need of formulation

A. Kagale  
Name and Signature of Teacher  
Dr. Lubdha A. Kagale



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Name and Signature of HoD  
Head  
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Vivekanand College  
Kolhapur

Annual Teaching Plan

Academic Year: 2020-21 Semester: V Department: Botany

Subject: Botany Course Title: B.Sc. III

Name of the teacher: Dr. Lubdha Abhijeet Kagale

Month . NOV. & Dec....			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	Unit- 1 (Section-II) Microbiology	Methods in microbiology
3	3	6		
Month .. Jan. & Feb....			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	microbiology	Scope in the industry
3	3	6		
Month .....			Module/Unit:	Sub-units planned
2	02	4	Microbiology	Scope in the industry and microorganisms in Biological world.

L. Kagale  
Name and Signature of Teacher  
Dr. Lubdha A. Kagale



[Signature]  
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Vivekanand College  
Kolhapur

Annual Teaching Plan

Academic Year: 2020-21 Semester: VII Department: Botany

Subject: Botany Course Title: B.Sc. - III

Name of the teacher: Dr. Lubdha Abhijeet Kagale

Month July			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section-II Unit-4- Ethnobotany	Intro, concept & scope, Data collection, Herbarium, Sacred groves
4		4		
Month August			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Ethnobotany section-1 Plant Breeding	Role of Ethnobotany in modern Medicine Intro, objectives, Plant genetic resources
5	1	6		
Month September			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section-II Herbal Technology	Pharmacognosy Phytochemicals Drug types and adulteration scope
6	3	9		

L. Kagale  
Name and Signature of Teacher  
Dr. Lubdha A. Kagale



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Head  
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Vivekanand College  
Kolhapur


**Annual Teaching Plan**

Academic Year: 2020-21..... Semester: BDEh Sem Department: Botany  
 ..... Per year.  
 Subject: Botany..... Course Title: B.Sc. I, II, III.....  
 Name of the teacher: Dr. Sarika Dipak Patil.....

Month ..... Dec. ....			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	Sem II Psc-7E Section II Unit - II	2a - Syllabus Discussion and classification on Pathogens
Sc I	—	—		
II	—	—		
III	4	04		
Month ..... Jan. ....			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	Sem II Dsc 7E Section II Unit II	Classification on crops and Symptoms.
Sc I	—	—		
II	—	—		
III	7	07		
Month ..... Feb. ....			Module/Unit:	Sub-units planned
Sc I	—	13	Dsc 7c sec II Unit 1ab Dsc 7c sec II → Units Dsc 10/2C 2 Sec II → Unit II Practical PP/Bot Dsc - 7E sect II → 3a, 3b, 3c	3c, 3b, 3c
II	12+3	3		
III	4	04		

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



  
 Name and Signature of HoD  
 Head  
 Department of Botany  
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 Kolhapur

**Annual Teaching Plan**

Academic Year: 2020-21 Semester:..... Department: Botany

Subject: Botany Course Title: B.Sc. II, III

Name of the teacher: Dr. Sarika D. Patil

Month ..... <u>Dec..Mar..</u>			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total		
I	—			
II	5+4	5+4	Sem IV DSC 7D Unit I DSC 1011 D <sub>2</sub> Set I Unit I	1a, 1b. Practical s PP 1a, 1b, 1c Bot.
III	5	—	Sem V DSC 7G 2	Unit II 2a, 2b, 2c
Month ..... <u>Jan..Apr..</u>			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total		
I	—			
II	4+5	4+5	Sem IV DSC 7D Unit I 1b, 1c DSC 1011 D <sub>2</sub> Set I Unit I	Parasites 1a, 1d, 1e Practical s PP, Bot.
III	5	—	Sem V DSC 7G Set II	Unit 3 3a 3b.
Month ..... <u>Feb..May..</u>			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total		
I	—			
II	4+4	4+4	Sem IV DSC 7D Unit 3 3a 3b DSC 1011 D <sub>2</sub> Set I Unit 4	Practical PP, Bot Modification root
III	3	—	Sem V DSC 7G Set II	Practical Unit 3 3c, 3d

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



[Signature]  
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**Annual Teaching Plan**

Academic Year: 2020-21 Semester:..... Department:

Subject:..... Course Title: B.Sc I, II, III

Name of the teacher: Dr. Sarika D. Patil

Month ..... <u>JUN</u> .....			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total		
B.Sc. I	—	04	Study of Fungi	Mycor Penicillium VAM Fungi
II	3+4	3+4	Dsc 7C sect II Unit I	1b
III	4	—	Dsc 10/2 C2 sect II Unit 3	3a, 3b, 3c Practicals PP Bot.
			Dsc-7E sect II →	3d, 3e
Month ..... <u>JULY</u> .....			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total		
B.Sc. I	—		Study of Bryophytes	
II	3+3	3+3	Dsc 7C Set II Unit I	1c
III	3	—	Dsc 10/2 C2 Set II Unit 3	3a Rust smut
			Dsc 7F Set II Unit 2	2b Practicals PP/Bot
			Dsc 7E - Set II	3F
Month ..... <u>AUG</u> .....			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total		
B.Sc. I	—		Study of Pteridophytes	
II	4+4	4+4	Dsc. 7C sect I Unit I	1c, Test
III	3	—	Dsc 10/2 C2 Sect II Unit 3	1kka, Powdery Downy
			Sem VI Dsc 7G	Practicals Bot/PP
			sect I - Unit I	Unit I

Name and Signature of Teacher

(Dr. Sarika D. Patil.)



Name and Signature of HoD

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Annual Teaching Plan

Academic Year: 2020-21 Semester: I & III Department: Botany

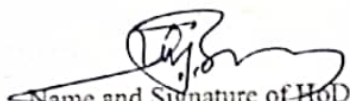
Subject: Botany Course Title: B.Sc. I & II

Name of the teacher: Dr. Ketaki Prakash Patil

	Month ... March .....			Module/Unit:	Sub-units planned
	Lecture s	Practical s	Total		
B.Sc. I	3	1		Practical - I Topic - Lichen	Defination types, reproduction & economic important
II	2	1	7	Topic - Family Introduction,	
III					
	Month ... April .....			Module/Unit:	Sub-units planned
	Lecture s	Practical s	Total		
B.Sc. I		1		Practical - I & II Topic - family	Morphology Floral, distinguishing characters
II	3	2	6	Apocynaceae Lamiaceae Annonaceae	
III					
	Month ... May .....			Module/Unit:	Sub-units planned
	Lecture s	Practical s	Total		
B.Sc. I		1		Practical I & II Lamiaceae	— / —
II	2	1	4		
III					

  
Name and Signature of Teacher



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

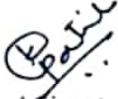
Annual Teaching Plan

Academic Year: 2020-21 Semester: I Department: Botany

Subject: Botany Course Title: B.Sc. I

Name of the teacher: Dr. Ketaki Prakash Patil

	Month ... Nov. & Dec			Module/Unit:	Sub-units planned
	Lecture s	Practical s	Total		
Sc-I	3	1	4	B.sc. I Practical	Introduction classification
II				Topic - fungi	
III					
	Month ... Jan. & Feb			Module/Unit:	Sub-units planned
	Lecture s	Practical s	Total		
Sc-I	3	2	5	Topic - fungi	Economic importance
II				B.sc. I Practical	
III					
	Month ... Mar. & April			Module/Unit:	Sub-units planned
	Lecture s	Practical s	Total		
Sc-I	3	1	4	Topic - fungi	Mucor Penicillium VAM fungi & it's importance
II				B.sc. I - Practical	
III					

  
Name and Signature of Teacher



  
Name and Signature of HoD

Head  
Department of Botany  
Vivekanand College  
Kolhapur

Annual Teaching Plan

Academic Year: 2020-21 Semester: ~~III~~ <sup>IV</sup> Department: Botany


Subject: Botany Course Title: B.Sc. II

Name of the teacher: Dr. Ketaki Prakash Patil

Month July & August			Module/Unit:	Sub-units planned
Sc. I	Lectures	Practicals	Topic - enzyme B.Sc. II	- lock-key hypothesis - Induced fit hypothesis
II	3	2		
III				
Month Dec & Jan			Module/Unit:	Sub-units planned
Sc. I	Lectures	Practicals	Topic - enzyme	- Allosteric modification
II	2	1		
III				
Month Feb & March			Module/Unit:	Sub-units planned
Sc. I	Lectures	Practicals	Topic - Ecology	..
II	2	1		
III				

  
Name and Signature of Teacher



  
Name and Signature of HoD

Head  
Department of Botany  
Vivekanand College  
Kolhapur

## Annual Teaching Plan

Academic Year: 2020-21 Semester: V Department: Botany

Subject: Botany Course Title: B.Sc. III

Name of the teacher: Dr. Ketaki Prakash Patil

Month .. Nov. & Dec			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	cell is unit of life  Practical - B.Sc. III	1a - The cell theory 1b - cell membrane & cell wall
3	3	6		
Month .. Jan & Feb			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	cell is unit of life  Practical - B.Sc. III	1c The functions of membranes, Models of membrane structure
3	3	6		
Month ..			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	- cell is unit of life  - Radiation Practical - B.Sc. III	1d -  4d - Autoradiography 4e - Mullär - experiment 4f - precautionary measures
2	2			

  
Name and Signature of Teacher



  
Name and Signature of HoD

Head  
Department of Botany  
Vivekanand College  
Kolhapur

## Annual Teaching Plan

Academic Year: 2020-21 Semester: VI Department: Botany

Subject: Botany Course Title: B.Sc. III

Name of the teacher: Dr. Ketaki Prakash Patil

Month <u>July</u>			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	Extra-chromosomal - Introduction Genome  Practical - 2 B.Sc. III	- organization
3	2			
Month <u>August</u>			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	Extra-chromosomal - plastid Genome  Practical - 2 B.Sc. III	Inheritance
2	2			
Month <u>September</u>			Module/Unit:	Sub-units planned
Lecture s	Practical s	Total	Extra-chromosomal - Mitochondrial Genome.  Practical - B.Sc. III	Inheritance
1	2			

Patil  
Name and Signature of Teacher



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