

Jr. College Regon. No. H.S.C./ 1074/R-1/DT : 8-8-1976
Jr. College Code No. 23-09-002
Jr. College Udise No. 27341301006
AISHE Code : C-11059

"ज्ञान, विज्ञान आणि सुसंस्कार यांसाठी शिक्षण प्रसार"

Estd : June 1964

-शिक्षणमहर्षी डॉ. बापूजी साळुंखे

Shri Swami Vivekanand Shikshan Sanstha's

VIVEKANAND COLLEGE, KOLHAPUR

(AN EMPOWERED AUTONOMOUS INSTITUTE)

2130, 'E' ward, Tarabai Park, Kolhapur, Tal. Karveer, Dist. Kolhapur -416003

Affiliated to Shivaji University, Kolhapur (M.S.)

NAAC Reaccredited : "A+" (C. G. P. A. - 3.29)

College with Potential for Excellence by U.G.C., New Delhi

"Star College" by D.B.T Govt. of India

ISO 9001 : 2015



Ph : 0231 2658612 | Fax : 0231-2658840 | Resi.: 0231-2653962 | Website : www.vivekanandcollege.ac.in | E-mail : info@vivekanandcollege.org

Founder

Dr. Bapuji Salunkhe
D.Lit.

President

Hon. Chandrakant Dada Patil
Minister, Higher & Technical Education,
Parliamentary Affairs

Chairman

Prin. Abhaykumar Salunkhe
M.A.

Secretary

Prin.Mrs. Shubhangi Gawade
M.Sc., B.Ed.

Principal

Dr. R. R. Kumbhar
M.Sc. M Phil, Ph D

Department of Botany

Syllabus Completion Report

2024-2025



Jr. College Recog.No. H.S.C./ 1074/R-1/DT : 8-8-1976
Jr. College Code No. 23-09-002
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Syllabus Completion Report

2024-2025

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Dangat
Head
25.03.25
Department of Botany
HEAD
DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
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R. K.
Principal
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STATEMENT OF SYLLABUS COVERED

Year: 2024-2025

Term: Ist

Name of the Teacher: Dr. Bhaurav Tukaram Dangat

Department: Botany

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|--------------|-------------------|--|---|--------------------------------|----------------|
| B.Sc. I | Botany | Unit I: General organization of plant body: Unit II: Study of Inflorescence | Root system – Introduction, types and modification of Shoot system - Introduction and modification of stem Leaf – Introduction, Types- Simple and Complex, Phyllotaxy, Leaf venation, Modification Definition and characters, types of inflorescence and significance of inflorescence. Practical's | | Completed |
| B.Sc. II | Botany (Minor) | Unit-2: Botanical Nomenclature | Principles and rules (ICN), Salient features of International Code of Botanical Nomenclature (ICBN), Rules and regulations of Binomial nomenclature System, Systems of Classification-Natural, Artificial and Phylogenetic, Bentham and Hooter's system of Classification (Up to series). Study of Sunflower and Maize root and stem. Practical's | | Completed |



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|--------------|-------------------|---|--|-----------|
| B.Sc. II | Botany (Major) | Unit- 3: Angiosperms | Introduction, Habit and Habitat diversity, Methods of reproduction, Evolutionary history, Taxonomic hierarchy, Bentham and Hooker System of Classification (Merit and Demerit), Difference between Dicot and Monocot plant, Study of Sunflower and Maize root and stem. Practical's | Completed |
| B.Sc. III | Botany | Unit II: System of Classification Unit IV: Paleobotany | Phylogeny of Angiosperms, The general account of origin of Angiosperms (with reference to Gnetalean theory). Classification system of Takhtajan, Brief reference of Angiosperm Phylogeny Group (APG-III) classification (2009). Ranks of IUCN and methods of Conservation. General account types of fossils, Geological time scale. Study of following form genera with reference to systematic position, external morphology and affinities – <i>Lyginopteris</i> and <i>Enigmocarpon</i> 4c:Applications of Paleobotany-Role of microfossils in oil and coal exploration. Practical's | Completed |

(Signature of the Teacher)

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STATEMENT OF SYLLABUS COVERED

Year: 2024-2025

Term: IInd

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

Department: **Botany**

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|-------------|-------------------|--|--|-------------------------|-----------|
| B.Sc. I | Botany | Unit-4: Endosperm and Embryo: | Introduction, Development of endosperm, Types of endosperms. Embryogeny. Structure of dicot and monocot embryo. Seed formation, Polyembryony. Practical's | | Completed |
| B.Sc. II | Botany (Minor) | Unit- 3: Angiosperms | Introduction, Habit and Habitat diversity, Methods of reproduction. Evolutionary history, Taxonomic hierarchy, Bentham and Hooker System of Classification (Merit and Demerit). Difference between Dicot and Monocot plant, Study of Sunflower and Maize root and stem. Practical's | | Completed |
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|--------------|--------|--|-----------|
| B.Sc. III | Botany | Unit IV: Plant Breeding. Introduction and objectives, Plant genetic resources, Centers of origin and Domestication of crop plants. Methods of crop improvements. Methods of Breeding. Selection methods for self- pollinated, cross pollinated and vegetative propagated plants. Mutation breeding. Practical's | Completed |
|--------------|--------|--|-----------|

(Signature)
(Signature of the Teacher)

(Signature) 24.03.25
(Signature of the Head)
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STATEMENT OF SYLLABUS COVERED

Year : 2024-25

Term – Ist

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

Department: Botany

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus not be covered | Remarks |
|----------|---------------------------|--|--|-------------------------|-----------|
| B.Sc. -I | Botany | Paper II Unit. 3 – Study of Flower Unit. 4 – Study of Fruit | Paper II Unit. 3 – Study of Flower Unit. 4 – Study of Fruit | | Completed |
| | Botany (Practical) | Study of Microscope, <i>Nostoc, Mucor, Moss, Pteris, Cycas, Hibiscus</i> , Root, Stem and Leaf modifications, Typical Flower | Study of Microscope, <i>Nostoc, Mucor, Moss, Pteris, Cycas, Hibiscus</i> , Root, Stem and Leaf modifications, Typical Flower | | Completed |
| B.Sc. II | Botany (Major) | Paper – VI Unit. 1- Phanerogams Unit. 4 – Taxonomic Literature | Paper – VI Unit. 1- Phanerogams Unit. 4 – Taxonomic Literature | | Completed |
| B.Sc. II | Botany (Major) Practicals | Study of <i>Spirogyra, Sargassum, Rhizopus, Puccinia, Riccia, Anthoceros, Azolla</i> and <i>Selaginella</i> . | Study of <i>Spirogyra, Sargassum, Rhizopus, Puccinia, Riccia, Anthoceros, Azolla</i> and <i>Selaginella</i> . | | Completed |
| B.Sc. II | Botany (Minor) | Paper – VI Unit. 4 – Taxonomic Literature | Paper – VI Unit. 4 – Taxonomic Literature | | Completed |
| | Botany (Minor) Practicals | Study of <i>Spirogyra, Sargassum, Rhizopus, Puccinia, Riccia, Anthoceros, Azolla</i> and <i>Selaginella</i> . Study of Herbarium, Taxonomic literature, Family Malvaceae and Amaryllidaceae | Study of <i>Spirogyra, Sargassum, Rhizopus, Puccinia, Riccia, Anthoceros, Azolla</i> and <i>Selaginella</i> . Study of Herbarium, Taxonomic literature, Family Malvaceae and Amaryllidaceae | | Completed |



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|-----------|----------------|---|---|--|-----------|
| B.Sc. III | Botany | Paper – VIII Unit. 3- Plant Families | Paper – VIII Unit. 3- Plant Families | | Completed |
| | Practical - II | Study of plant families | Study of plant families | | Completed |


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STATEMENT OF SYLLABUS COVERED

Year : 2024-25

Term – IInd

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

Department: Botany

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus not be covered | Remarks |
|----------|---------------------------|--|--|-------------------------|-----------|
| B.Sc. -I | Botany | Paper III Unit. 1 – Study of Microsporogenesis Paper IV Unit. 2 – Domains of Life | Paper III Unit. 1 – Study of Microsporogenesis Paper IV Unit. 2 – Domains of Life | | Completed |
| | Botany (Practical) | Study of typical anther, ovules, structure of pollen grain, pollen viability and germination, seed germination. Study of kingdom Monera, Protista, Types of bacteria. Study of quadrat method. Study of dicot and monocot embryo and endosperm. | Study of typical anther, ovules, structure of pollen grain, pollen viability and germination, seed germination. Study of kingdom Monera, Protista, Types of bacteria. Study of quadrat method. Study of dicot and monocot embryo and endosperm. | | Completed |
| B.Sc. II | Botany (Major) | Paper – VII Unit. 4 – Bio-fuel technology Paper – VIII Unit. 2 – Extraction of sugar from sugarcane. | Paper – VII Unit. 4 – Bio-fuel technology Paper – VIII Unit. 2 – Extraction of sugar from sugarcane. | | Completed |
| B.Sc. II | Botany (Major) Practicals | Study of major forest products, Study of methods of extraction, Study of cosmetic, aromatic plants, Study of Rose and Gerbera | Study of major forest products, Study of methods of extraction, Study of cosmetic, aromatic plants, Study of Rose and Gerbera | | Completed |



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|-----------|-------------------|---|---|--|-----------|
| B.Sc. II | Botany (Minor) | Paper – VII Unit. 4 – Taxonomic Importance | Paper – VII Unit. 4 – Taxonomic Importance | | Completed |
| B.Sc. III | Botany | Paper – XVI Unit. 2- Gardening and Ornamental plants | Paper – XVI Unit. 2- Gardening and Ornamental plants | | Completed |
| | Practical - II | Study of Qualitative test for sugar, starch and cellulose, proteins and lipids. Determination of fatty acid value. Estimation of proteins. Separation of amino acid. Phytochemical studies. Study of chlorophyll content. Study of fossils. Study of genus and species. Study of pollen viability and germination. Study of Herbarium technique. | Study of Qualitative test for sugar, starch and cellulose, proteins and lipids. Determination of fatty acid value. Estimation of proteins. Separation of amino acid. Phytochemical studies. Study of chlorophyll content. Study of fossils. Study of genus and species. Study of pollen viability and germination. Study of Herbarium technique. | | Completed |



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




(Signature of Head of Department)

24.03.25
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STATEMENT OF SYLLABUS COVERED

Year: 2024-2025

Term: Ist / Hnd

Name of the Teacher: Dr. Annapurna Ram Alvikar Department: Botany

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|-------------------------------|---|---|-------------------------------------|--------------------------------|----------------|
| B.Sc. III (Sem. V) | Botany Paper – DSE 1007E3 Section-I “Plant Biochemistry and Stress Physiology” | Section-I: Unit 3: ‘Stress Physiology’ Introduction, Defining, Plant stress, Types of stress- Water stress, Salinity stress, Temperature stress, Stress sensing mechanism in plants, Calcium signaling, Phospholipid signaling | All syllabus covered | Nil | -- |
| | Botany Paper – DSE 1007E3 Section-I “Plant Biochemistry and Stress Physiology” | Section-I: Unit 4: ‘Senescence and Aging’ Introduction, Patterns of Senescence, Physical changes during senescence, Control of Senescence. | All syllabus covered | Nil | -- |



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|--|--|---|-------------------------------------|------------|-----------|
| | Paper – DSE 1007E4 Section-II Plant “Systematics and Paleobotany” | Section-II: Unit 1 “Importance of Plant Systematics” 1a: Introduction to Systematics, Evidences From Palenology , Cytology, Phytochemistry and Molecular data | All syllabus covered | Nil | -- |
|--|--|---|-------------------------------------|------------|-----------|

(Signature of Teacher)

(Dr. Alvikar A.R.)

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VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

STATEMENT OF SYLLABUS COVERED

Year: 2024-2025

Term: Ist / IInd

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

Department: **Botany**

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|---------------------------|--|---|------------------------------|-------------------------|---------|
| B.Sc. II (Sem.III) | Botany | Practicals | All Practical covered | Nil | -- |
| | Botany Paper I – DSC03BOT31 “Diversity of Cryptogams” Unit-4 Pteridophyte Paper II – DSC03BOT32 “Diversity of Phanerogams” Unit 4- Taxonomic Importance | Unit-4 Pteridophyte Introduction, Distribution in India, Methods of reproduction, Outline of Classification according to Smith (1955), Heterospory, Study of example with reference to occurrence, plant body, and life cycle of <i>Selaginella</i> and <i>Azolla</i> . Unit 4 Taxonomic Importance Molecular taxonomy and | All syllabus covered | Nil | -- |



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| | | DNA Barcoding of plants, Herbaria, Herbarium technique and Digital herbaria. | | | |
| | Botany Paper I – MIN03BOT31 “Diversity in Non-flowering plant” Unit-4 Pteridophyte | Unit-4 Pteridophyte Introduction, Distribution in India, Methods of reproduction, Outline of Classification according to Smith (1955), Heterospory, Study of example with reference to occurrence, plant body, and life cycle of <i>Selaginella</i> and <i>Azolla</i> . | All syllabus covered | Nil | -- |

(Signature of Teacher)

(Dr. Alvilkar A.R.)



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Year: 2024-2025

Term: Ist / IInd

Name of the Teacher: Dr. Annapurna Ram Alvikar

Department: Botany

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|-----------------------------|----------------|--------------------------|-----------------------------|--------------------------------|----------------|
| B.Sc. I (Sem. I) | Botany | Practicals | All syllabus covered | Nil | -- |

(Signature of Teacher)

(Dr. A/vi) cur. A-R



(Signature of Head of Dept.)

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STATEMENT OF SYLLABUS COVERED

Year: 2024-2025

Term: Ist / IInd

Name of the Teacher: **Dr. Annapurna Ram Alvikar** Department: **Botany**

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|----------------------|---------|-------------------|-------------------------------|-------------------------|---------|
| B.Sc. I (Sem. II) | Botany | Practical's | All Practical's covered | Nil | -- |

(Signature of Teacher)

(Dr. Alvikar. A.R.)



(Signature of Head of Dept.)

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STATEMENT OF SYLLABUS COVERED


Year: 2024-2025

Term: Ist / IInd

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

Department: **Botany**
(Major)

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|-----------------------|--|--|------------------------|-------------------------|---------|
| B.Sc. II (Sem. IV) | Botany Paper II-“Industrial Botany” Unit 3: Sources of Natural Dyes Unit 4: Importance of Seed Industry | Introduction, Sources of natural dyes in India and their extraction methods Merits and limitations of plant based dyes. Introduction, Importance of seed industry, Seed production, Seed processing and Marketing, Major seed industries and corporation of India | All syllabus covered | Nil | |
| | Botany | Practicals | All Practicals covered | Nil | -- |


(Signature of Teacher)

(Dr. Alvikar. A.R)




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STATEMENT OF SYLLABUS COVERED


Year: 2024-2025

Term: Ist / IInd

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

Department: **Botany**
(Minor)

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|------------------------------|--|--|--------------------------------|-------------------------|---------|
| B.Sc. II (Sem. IV) | Botany Paper II- "Commercial Botany" Unit 3: Bryophyte and Pteridophytes | Introduction, Potential member, Products, processing and application of Moss <i>Marchantia</i> , <i>Riccia</i> Pteridophyte- Processing and application of <i>Adiantum</i> , Products, processing and application of <i>Nephrolepis</i> , <i>Dryopteris</i> , <i>Polypodium</i> , <i>Lycopodium</i> . | All syllabus covered | Nil | |
| | Botany | Practical's | All Practical's covered | Nil | -- |


(Signature of Teacher)

(Dr. Alvikar. A.R.)




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VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

STATEMENT OF SYLLABUS COVERED

Year: 2024-2025

Term: Ist / IInd

Name of the Teacher: **Dr. Annapurna Ram Alvikar** Department: **Botany**

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|--------------------------------|---|---|-----------------------------|-------------------------|---------|
| B.Sc. III (Sem. VI) | Botany Paper: DSE 7 F1 Section I: Unit 1: Genetic Material | Griffith's and Avery's transformation experiment, Hershey-Chase bacteriophage experiment, DNA Structure and types of DNA, DNA Replication, types of RNA | All syllabus covered | Nil | -- |
| | Paper: DSE 7 F2 Section II: Unit 1: Herbal Technology | Pharmacognosy – Introduction, Definition, Pharmacognosy techniques. Phytochemicals: Alkaloids and Phenols Drug- Types and adulteration Scope of Pharmacognosy | All syllabus covered | Nil | -- |

(Signature of Teacher)
(Dr. Alvikar A.R.)



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STATEMENT OF SYLLABUS COVERED

Year: **2024-2025**

Term: **Ist / IInd**

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

Department: **Botany**

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|------------------|---------------|---|---|-------------------------|-----------------------------|
| B.Sc. III | Botany | DSE-1007E1 Section I: Unit 1: Cell Organelles | Introduction, Eukaryotic cell components- Nucleus, Eukaryotic cell components- Endoplasmic reticulum, Golgi complex, Glyoxisomes, Peroxisomes and Lysosomes- Structure, composition and functions Specialized cell organelle- Ribosome | | All syllabus covered |
| B.Sc. III | Botany | Section I: Unit 4: Radiation Biology | Radioactive isotopes, Introduction & examples Effect of radiations on Biological systems Beneficial effects of radiations Autoradiography Technique Geiger-Muller Experiment / Liquid Scintillation Counter Precautionary measures | | All syllabus covered |



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|-----------------------------|---------------|--|--|--|----------------------------|
| B.Sc. II (Major) | Botany | DSC03BOT31: “Diversity of Cryptogams” Unit I: Algae | Cryptogams: Introduction, General Characters Algae: Introduction Range of Thallus organization Modes of reproduction Classification of Algae (G. M. Smith) Study of example with reference to occurrence, plant body and life cycle of <i>Spirogyra</i> and <i>Sargassum</i> Economic importance of Algae | | All syllabus covered |
| | | DSC03BOT32: Unit 1: Gymnosperms | <i>Pinus</i> : Occurrence, habitat, vegetative structure, reproduction and Life cycle | | All syllabus covered |



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|-----------------------------|---------------|--|--|--|----------------------------|
| B.Sc. II (Minor) | Botany | MIN03BOT31: “Diversity in non-flowering plants” Unit I: Algae | Cryptogams: Introduction, General Characters Algae: Introduction Range of Thallus organization Modes of reproduction Classification of Algae (G. M. Smith) Study of example with reference to occurrence, plant body and life cycle of <i>Spirogyra</i> and <i>Sargassum</i> Economic importance of Algae | | All syllabus covered |
| B.Sc. I | Botany | DSC03BOT11 “Basics in Botany” Unit II: General outline of plant kingdom | Study of characters of plant kingdom Study of classification of plant kingdom Study of five divisions with respect to characters and economic importance | | All syllabus covered |



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|----------------------|----------------------|--|--|--|------------------------------|
| B.Sc. I | Botany | Unit IV: Organization of higher plant body | Plant organs (Root, Stem and Leaf) Development of plant body Internal organization Study of tissue systems- Meristematic tissue, simple and complex tissue | | All syllabus covered |
| B. Sc. I | Botany Practicals | As per curriculum | | | All Practicals covered |
| B. Sc. II (Minor) | Botany Practicals | As per curriculum | | | All Practicals covered |
| B. Sc. I (O.E.) | Botany Practicals | As per curriculum | | | All Practicals covered |

Pratyaksh
(Signature of Teacher)
(Dr. Priya D. Patil)



Sangal
(Signature of Head of Dept.)
HEAD
DEPARTMENT OF BOTANY
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STATEMENT OF SYLLABUS COVERED

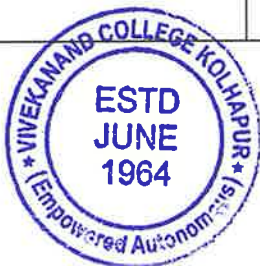
Year: 2024-2025

Term: Ist / IInd

Name of the Teacher: Dr. Priya Digambar Patil

Department: Botany

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|-----------|---------|---|--|-------------------------|----------------------|
| B.Sc. III | Botany | Section I: Unit 3: Genetic Engineering | Introduction, Methods of gene transfer: <i>Agrobacterium</i> mediated, Direct gene transfer by Electroporation, Microinjection, Microprojectile bombardment, Transgenic plants (Bt cotton and Golden rice), Applications of genetic transformation. Blotting Techniques: Northern, Southern and DNA Fingerprinting | -- | All syllabus covered |
| B.Sc. III | Botany | Section I: Unit 4: Plant Tissue Culture | Principle and Totipotency, Components of culture media, Sterilization Techniques, Techniques in Tissue culture (Callus culture and cell suspension), Organogenesis | -- | All syllabus covered |



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|----------|--------|--------------------------|---|----|----------------------------|
| B.Sc. II | Botany | Unit 2: Gymnosperms | <p>Introduction, Distribution of Gymnosperms Methods of reproduction</p> <p>Outline of classification system according to Sporne (1965)</p> <p>Study of example with reference to occurrence, plant body and life cycle of <i>Pinus</i></p> <p>Study of example with reference to occurrence, plant body and life cycle of <i>Gnetum</i></p> | -- | All syllabus covered |
| B.Sc. II | Botany | Unit 4: Higher Plants | <p>Introduction, Potential member, Products, Processing Applications of organisms (Future Prospects) Gymnosperms: <i>Cycas, Pinus</i></p> <p>Potential member, Products, Processing Applications of organisms (Future Prospects) Gymnosperms: <i>Gingko, Taxus</i></p> <p>Angiosperms: Aswahagandha, Ashoka, <i>Plumbago, Costus</i></p> | -- | All syllabus covered |



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|-----------------------|-------------------------------------|---|---|----|------------------------------|
| B.Sc. I | Botany | Unit 2: Megasporogenesis | Study of ovule, Types of ovules Study of megasporogenesis Study of typical embryo sac, Study of types of embryo sac: Monosporic (<i>Polygonus</i> type), Bisporic (<i>Allium</i> sp.) and Tetrasporic (<i>Peperomia</i> type) | -- | All syllabus covered |
| B.Sc. I | Botany | Unit 4: Conservation of Plant Diversity | Introduction and definition Types of conservation (<i>In situ</i> and <i>Ex</i> <i>situ</i>), Necessity of conservation | -- | All syllabus covered |
| B.Sc. I (Thursday) | Botany Practicals (2 Batches) | As per curriculum | | -- | All Practicals covered |
| B.Sc. I (Friday) | O.E. Botany Practicals | As per curriculum | | -- | All Practicals covered |
| B.Sc. II | Botany Practical- II | As per curriculum | | -- | All Practicals covered |

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



Gangal
Name and Signature of HoD
HEAD
DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

STATEMENT OF SYLLABUS COVERED

Year: 2024-2025

Term: Ist

Name of the Teacher: **Dr. Mrunalini Nilesh Desai**

Department: **Botany**

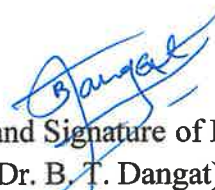
| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|-----------------|-----------------------|--|--|-------------------------|-----------|
| B.Sc. II | Botany (Major) | Unit II: Fungi | Introduction, Habit (Types of mycellium), Mode of Nutrition. Methods of reproduction. Outline of classification according to Alexopoulous and Mims (1979). Economic importance of Fungi. <i>Rhizopus</i> - occurrence, plant body and life cycle <i>Puccinia</i> - occurrence, plant body and life cycle. | | Completed |
| | | “Diversity of Phanerogams” (DSC-VI: DSCBOT32) Unit II:Gymnosperms | Introduction, Distribution in India, Methods of reproduction. Outline of classification according to Sporne(1965) <i>Gnetum</i> - occurrence, plant body and life cycle. | | Completed |



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|----------------------|---------------------------|--|--|--|------------------------------|
| B.Sc. II | Botany (Minor) | Unit II: Fungi | Introduction, Habit (Types of mycellium), Mode of Nutrition. Methods of reproduction. Outline of classification according to Alexopoulous and Mims (1979). Economic importance of Fungi. <i>Rhizopus</i> - occurrence, plant body and life cycle <i>Puccinia</i> - occurrence, plant body and life cycle. | | Completed |
| B.Sc. III | Botany | Section II: Unit I: Plant Pathology | Classification of plant diseases based on pathogen, crops and symptoms. Study of mechanism of Infection in disease development, prevention and control of plant diseases. Role of Quarantine. Significance of Plant Pathology. | | Completed |
| | | Section II: Unit III: Study of Plant Diseases | Introduction, Cereals: Rust of Wheat Cash crop: Red Rot of Sugarcane Legume: Wilt of Gram Spices: Leaf spot of Black Peeper Vegetables: Onion Smut Fruit: Apple Scab | | Completed |
| B.Sc. II | | Botany Practical- V.S.C. | As per curriculum | | All Practicals covered |


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




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

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

STATEMENT OF SYLLABUS COVERED

Year: 2024-2025

Term: IInd

Name of the Teacher: **Dr. Mrunalini Nilesh Desai**

Department: **Botany**

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|----------|---------|--|--|-------------------------|-----------|
| B.Sc. II | Botany | <p align="center">Paper I "Resource Botany"</p> <p align="center">Unit II: Plant resources used in cosmetics, aromatics and pharmaceuticals.</p> | <p>Introduction and scope, Herbal preparations, Methods of Extraction- Maceration, Digestion, Decoction, aromatic waste, Extracts and tinctures.</p> <p>Study of</p> <ol style="list-style-type: none"> 1. Aloe, 2. Heena, 3. Lemmon grass, 4. Rose 5. Jasmine 6. Turmeric 7. Ginger 8. Neem 9. Holy basil 10. Amla | | Completed |
| | | <p align="center">Paper II "Industrial Botany"</p> <p align="center">Unit I: Physical characteristics of Indian woods.</p> | <p>Manufacturing of paper and board from raw plant material manufacturing of crude and high quality paper, recycled paper</p> | | Completed |



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|-----------|----------------|---|--|--|------------------------------|
| B.Sc. III | Botany | <p>"Biostatistics Economic Botany and Ethnobotany"</p> <p>Section II</p> <p>Unit : I Biostatistics</p> <p>Unit II: Economic Botany I</p> | <p>1a. Introduction, Statistical terms</p> <p>1b. Sampling Methods</p> <p>1c. Collection and representation of data</p> <p>2a. Study of economical important plant with ref. to origin, morphology, part used and uses.</p> <p>2b. Cereals- Barley and Oats</p> <p>2c. Legumes- Soybean and Vigna</p> <p>2d. Vegetables- Spinach</p> <p>2e. Spices- Clove and black pepper</p> | | Completed |
| B.Sc. I | Botany | Botany Practical - I | As per curriculum | | All Practicals covered |
| B.Sc. I | Botany O.E. | Botany Practical | As per curriculum | | All Practicals covered |
| B.Sc. II | Botany | Botany Practical | As per curriculum | | All Practicals covered |


Name and Signature of Teacher

(Dr. Mrunalini N. Desai)



Name and Signature of HOD




HEAD
DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)



| | | | | | |
|---------------------|--------------------------------|--|---|--|-----------|
| | Practicals | MIN 03BOT39 Diversity of non-flowering plant and Plant Taxonomy | All Practical's are covered. | | Completed |
| B.Sc. II VSC | VSC-PR-I VSC03 BOT39 | Bonsai and Terrarium | All Practical's are covered. | | Completed |
| B.Sc. III | Botany | Paper: DSE1007E1 Section- I Unit III: Analytical Techniques in Plant Sciences Paper: DSE1007E2 Section- I Unit II: Lipid Metabolism and Fatty acid metabolism | Principals of Microscopy - Light Microscopy, Fluorescence and Electron(TEM and SEM) Microscopy. Functions of Taxonomy- Identification, Nomenclature, Classification, Ranks, Categories and Taxonomic groups. 0 Introduction and Classification of Lipids, Properties of Fatty acids (Saturated Fatty acids, Unsaturated Fatty acids), Beta oxidation Gluconeogenesis and role in mobilization of fatty acids during germination, Significance of lipids. | | Completed |


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




 Name and Signature of HoD
 DEPARTMENT OF BOTANY
 VIVEKANAND COLLEGE, KOLHAPUR
 CALSOPHOMALIST

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS INSTITUTE)

STATEMENT OF SYLLABUS COVERED

Year: 2023-2024

Term: IInd

Name of the Teacher: **Dr. Snehal Sanjay Wadkar**

Department: **Botany**

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|----------|---------|---|---|-------------------------|-----------|
| B.Sc. I | Botany | Unit-3: Pollination and Fertilization. | Introduction and definition, Types of pollination (self, cross and its sub types) Agents of pollination Double fertilization : Definition and mechanism | -- | Completed |
| | | Unit-1: Study of classification systems | Introduction and definition, Ranks of classification. Study of five kingdom classification system (R. H. Whittaker). Study of general characters of each kingdom. | | |
| B.Sc. II | Botany | Paper-III Unit-3: Floricultural Industry | Introduction to floriculture Cultivation practices, Harvesting and marketing of Rose Cultivation practices, Harvesting and marketing of Gerbera | -- | Completed |



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|-----------|--------|--|--|----|------------------------------|
| B.Sc. III | Botany | "Biostatistics, Economic Botany and Ethnobotany" Section II Unit III: Economic Botany II | 3a:Beverages-Tea and Coffee 3b:Fiber Yielding Plants-Cotton and <i>Hibiscus cannabinis</i> 3c:Oil yielding <i>Pongamia pinnata</i> , Sunflower 3d:Dye : <i>Lawsonia</i> and <i>Indigofera</i> | -- | Completed |
| B.Sc. I | Botany | Botany Practical - I | As per curriculum | | All Practicals covered |
| B.Sc. II | Botany | Botany Practical | As per curriculum | | All Practicals covered |
| B.Sc. II | VSC | VSC Practical | As per curriculum | | All Practicals covered |
| B.Sc. III | Botany | Botany Practical | As per curriculum | | All Practicals covered |

Name and Signature of Teacher

(Dr. Snehal S. Wadkar)

Name and Signature of HOD

HEAD
 DEPARTMENT OF BOTANY
 VIVEKANAND COLLEGE, KOLHAPUR
 (EMPOWERED AUTONOMOUS)



VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

STATEMENT OF SYLLABUS COVERED

Year: 2024-2025

Term: IInd

Name of the Teacher: Dr. Priyanka Pravin Jadhav

Department: Botany

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|----------------------|----------------|--|--|--|------------------|
| B.Sc. III | Botany | Section : II (DSE 1007F2): “Horticulture, Forestry and Herbal Technology Forestry” | 3a:Introduction, Forest types of India 3b:Wild life and Biosphere reserves 3c:Social and Agricultural Forestry 3d:Forest research education and Training institutions 3e:Forest Acts 3f: Different Plant as a forest products. | | Completed |
| B.Sc. III | Botany | Section : II (DSE 1007F1): “Biostatistics, Economic Botany and Ethno botany” | 4a:Introduction, Concep t and Scope 4b: Ethnobotanical studies with reference to data collection- Field work, Herbarium, Ancient literature, Archaeological findings, Sacred groves. 4c: Role of ethnobotany in modern medicine- Adathoda vasica, Tinospora cordifolia, Curcuma | | Completed |



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| | | | longa and Tribulus terrestris | | |
| B.Sc. II Major | Botany | DSC –VII: DSC03BOT41 “Resource Botany” | Introduction and Scope, Major forest produce their uses- Gum, Resin, Tannin and Pigments. Methods of seasoning and chemical treatment of specialized | | Completed |
| B.Sc. II Major | Botany | DSC –VIII: DSC03BOT42 “Industrial Botany” | Industrial manufacturing of packing material and plywood, the Classification of plywoods according to their use. Some important commercial woods - Dalbergia sp., Shorea robusta Tectona grandis, Cedrus deodara, Bamboo - the "Green Gold of India." | | Completed |
| B.Sc. I | Botany | Practical Batch B1,B7 | As per Curriculum | | Completed |
| B.Sc. I | Botany | Practical Batch B4,B9 | As per Curriculum | | Completed |
| B.Sc. I | Botany | Practical Batch B6 | As per Curriculum | | Completed |
| B.Sc. II | Botany Minor | Practical Batch B4 | As per Curriculum | | Completed |
| B.Sc. III | Botany | Practical I | As per Curriculum | | Completed |

Name and Signature of Teacher

Dr. P. P. Tadhar



Name and Signature of HoD
DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

STATEMENT OF SYLLABUS COVERED

Year: 2024-2025

Term: I / Sem II

Name of the Teacher: Mrs. Priya Ashish Talekar

Department: Botany

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|----------------------|---------|-------------------|-------------------------------|-------------------------|---------|
| B.Sc. I (Sem. II) | Botany | Practical's | All Practical's covered | Nil | -- |

(Signature of Teacher)



(Signature of Head of Dept.)

HEAD
DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

STATEMENT OF SYLLABUS COVERED


Year: 2024-2025

Term: II/ Sem IV (Major) VSC

Name of the Teacher: Mrs. Priya Ashish Talekar

Department: Botany

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|-----------------------|---------|-------------------|-------------------------------|-------------------------|---------|
| B.Sc. II (Sem. IV) | Botany | Practical's | All Practical's covered | Nil | -- |


(Signature of Teacher)




(Signature of Head of Dept.)
HEAD
DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

STATEMENT OF SYLLABUS COVERED

Year: 2024-2025

Term: II/ Sem IV (Minor)

Name of the Teacher: Mrs. Priya Ashish Talekar

Department: Botany

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|-----------------------|---------|-------------------|-------------------------------|-------------------------|---------|
| B.Sc. II (Sem. IV) | Botany | Practical's | All Practical's covered | Nil | -- |


(Signature of Teacher)




(Signature of Head of Dept.)
HEAD
DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

STATEMENT OF SYLLABUS COVERED

Year: 2024-2025

Term: III Sem VI

Name of the Teacher: Mrs. Priya Ashish Talekar

Department: Botany

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|------------------------|--|---|-----------------------------|-------------------------|---------|
| B.Sc. III (Sem. VI) | <p>Title: "Genetics and plant Breeding & Biostatistics ,Economic Botany and Ethnobotany"</p> <p>UNIT – 1 Heredity</p> <p>Section II : UNIT- 1 Biostatistics</p> | <p>1a. Introduction, Terminologies, Laws of Inheritance (Monohybrid and Dihybrid)</p> <p>1b. Multiple Allelism</p> <p>1d. Measures of central tendency (Mean, Median, Mode)</p> <p>1e. Variances and standard deviation, Coefficient of Variation.</p> <p>1f. Test of significance T-test , Chi-Square test</p> | All syllabus covered | Nil | |

P. Talekar
 (Signature of Teacher)



Gangadhar
 (Signature of Head of Dept.)
HEAD
DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

STATEMENT OF SYLLABUS COVERED

Year: 2024-2025

Term: III/ Sem VI


Name of the Teacher: Mrs. Priya Ashish Talekar

Department: Botany

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|------------------------|---------|-------------------|-------------------------------|-------------------------|---------|
| B.Sc. III (Sem. VI) | Botany | Practical's | All Practical's covered | Nil | -- |


(Signature of Teacher)




(Signature of Head of Dept.)
HEAD
DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

STATEMENT OF SYLLABUS COVERED

Year: 2023-2024

Term: IInd

Name of the Teacher: **Ms. Bogare Aishwarya Anandarav**

Department: **Botany**

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|----------|---------|---|---|-------------------------|-----------|
| B.Sc. II | Botany | <p align="center">Paper III "Diversity of Flowering plant" Unit I. Phanerogams</p> | <p>Introduction</p> <p>Distinguishing characters of Gymnosperm and Angiosperm</p> | | Completed |
| | | <p align="center">Paper IV "Commercial Botany" Unit II: Fungi</p> | <p>Introduction</p> <p>Potential fungi Products</p> <p>Processing and applications of fungi.</p> <p>1. <i>Trichoderma</i> 2. <i>Metarhizium</i> 3. <i>Beauveria</i></p> | | Completed |



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|-----------|--------|--|--|--|------------------------|
| B.Sc. III | Botany | "Genetics and Plant breeding" Section I Unit : II Linkage and Crossing over Unit III: Extra Chromosomal inheritance | 2a.Linkage concept and History. Types of Linkage 2b.Crossing over-concept and significance. Cytological proof of crossing over. 2c.Linkage maps. 3a.Introduction and organization of genome 3b.Plastid inheritance | | Completed |
| B.Sc. I | Botany | Botany Practical - I | As per curriculum | | All Practicals covered |
| B.Sc. II | Botany | Botany Practical | As per curriculum | | All Practicals covered |
| B.Sc. III | Botany | Botany Practical | As per curriculum | | All Practicals covered |

Bogare
Name and Signature of Teacher

Ms. A. A. Bogare



Bangal
Name and Signature of HOD

HEAD
DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

STATEMENT OF SYLLABUS COVERED

Year: 2023-2024

Term: IInd

Name of the Teacher: Shivani Vijay Khorate

Department: Botany

| Class | Subject | Syllabus Assigned | Syllabus Covered | Syllabus Not to covered | Remarks |
|-----------|-------------|--|---|-------------------------|------------------------|
| B.Sc. III | Botany | Recombinant DNA Technology Plant Tissue Culture | 1a. Introduction 1b. Principle of recombinant DNA technology 1c. Enzymes used in Recombinant DNA technology 1d. Cloning vectors 1. Plasmid 2. Bacteriophage 3. Cosmid 1e. PCR 4a. Embryogenesis 4b. Anther culture 4c. Application of Plant Tissue Culture. | | Completed |
| B.Sc. I | Botany | Botany Practical - I | As per curriculum | | All Practicals covered |
| B.Sc. I | Botany O.E. | Botany Practical | As per curriculum | | All Practicals covered |
| B.Sc. II | Botany | Botany Practical | As per curriculum | | All Practicals covered |

Name and Signature of Teacher

Miss. Shivani Vijay Khorate



Name and Signature of HOD

DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)