

"Dissemination of Education for Knowledge, Science and Culture." - Shikshanmaharshi Dr. Bapuji Salunkhe



SHRI SWAMI VIVEKANAND SHIKSHAN SANSTHA'S

Prin. Abhaykumar Salunkhe

2130, 'E' Ward, Tarabai Park, Tal. Karveer, Dist. Kolhapur - 416 003. Affiliated to Shivaji University, Kolhapur (M.S.)

Hon, Chandrakant Dada Patil

If the art Technical Education Marian Medicional

NAAC Reaccredited: "A" (CGPA - 3.24 in 3rd Cycle) College with Potential Excellence by U.G.C., New Delhi "Star College" by D.B.T. Govt. of India

SO 9001 : 2015

Dr. Bapuji Salunkhe

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

M.A.

Secretary

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

Dr. R. R. Kumbhar

#### Department of Botany

**Annual Teaching Plan** 

2024-2025

Annual Teaching Plan (2024-2025)



Department of Botany



"Dissemination of Education for Knowledge, Science and Culture." - Shikshanmaharshi Dr. Bapuji Salunkhe



SHRI SWAMI VIVEKANAND SHIKSHAN SANSTHA'S

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Dr. Bapuji Salunkhe

Hon. Chandrakant Dada Patil Higher and Technical Education Wilnister, Maharashira Prin. Abhaykumar Salunkhe

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

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

#### **Department of Botany**

#### **Annual Teaching Plan**

2024-2025

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Department of Botany

DEPARTMENT OF BOTANY **VIVEKANAND COLLEGE, KOLHAPUR** 

(EMPOWERED AUTONOMOUS) Annual Teaching Plan (2024-2025)



VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

**Department of Botany** 

#### I

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

Academic Year: 2024-2025

Name of the teacher: Dr. Bhaurav Tukaram Dangat

Programme: B. Sc. III

Semester: V

Subject: Botany

Course Title: "Biochemistry and Stress Physiology & Plants Systematics and Paleobotany"

N	Month: July		Module/Unit:	Sub-units planned
Lectures	Practical	Total	Section II:	Phylogeny of Angiosperms, The general account of origin of
04	04	08	Unit I1: System of Classification.	Angiosperms (with reference to Gnetalean theory)
Mo	onth: Augu	st	Module/Unit:	Sub-units planned
Lectures	Practical	Total		Classification system of Takhtajan, Brief reference of
04	04	05	Unit I1: System of Classification.	Angiosperm Phylogeny Group (APG-III) classification (2009).
Mon	th: Septem	ber	Module/Unit:	Sub-units planned
04	04	08	Unit I1: System of Classification. Unit IV: Paleobotany.	Ranks of IUCN and methods of Conservation. General account types of fossils, Geological time scale.
Mo	nth: Octob	er	Module/Unit:	Sub-units planned
04	1	04	Unit IV: Paleobotany	Study of following form genera with reference to systematic position, external morphology and affinities – Lyginopteris and
	E			Enigmocarpon 4c:Applications of Paleobotany- Role of microfossils in oil and coal exploration.

Name and Signature of HoD

OEPARTMENT DE BOTANY VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)



VIVEKANAND COLLEGE, KOLHAPUT

Academic Year: 2024-2025

Name of the teacher: Dr. Bhaurav Tukaram Dangat

Programme: B. Sc. I

Semester: I

Subject: Botany

Course Title: "Plant Morphology"

M	onth: Augus	t	Module/Unit:	Sub-units planned
Lectures	Practical's	Total		Root system –
Beetares	Tractical 5	1000	Unit I: General organization of plant body:	Introduction, types and
04	04	08	pant souj.	modification of
				Shoot system -
				Introduction and
				modification of stem
Mon	th: Septemb	er	Module/Unit:	Sub-units planned
Lectures	Practical's	Total	Unit I: General organization of	Leaf – Introduction,
			plant body:	Types- Simple and
04	04	08		Complex, Phyllotaxy,
				Leaf venation,
				Modification
Mo	nth: Octobe	r	Module/Unit:	Sub-units planned
T	D4'12 -	T-4-1	TI LIVE CL. I AV C	Definition and characters,
Lectures	Practical's	Total	Unit II: Study of Inflorescence	types of inflorescence
05	0.4	00		and significance of
05	04	09		inflorescence.

Name and Signature of HoD

DEPARTMENT OF BOTANY
VIVEKANAND FOLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)



VIVEKANAND COLLEGE, KOLHAPUF (EMPOWERED AUTONOMOUS)

Academic Year: 2023-2024

Name of the teacher: Dr. Bhaurav Tukaram Dangat

Programme: B. Sc. II

Semester: III

Subject: Botany (Minor)

Course Title: "MIN03BOT32: "Plant Taxonomy"

N	Month: July		Module/Unit:	Sub-units planned
Lectures	Practical's	Total	Unit-2:	Principles and rules (ICN), Salient features of
04	04	08	Botanical Nomenclature	International Code of
				Botanical Nomenclature (ICBN),
M	onth: Augus	t	Module/Unit:	Sub-units planned
Lectures	Practical's	Total	Unit-2:	Rules and regulations of
	-		Botanical Nomenclature	Binomial nomenclature
04	04	08		System, Systems of
				Classification-Natural,
				Artificial and
			7	Phylogenetic
Mon	Month: September		Module/Unit:	Sub-units planned
Lectures	Practical's	Total		Bentham and Hooter's
			Unit-2: Botanical Nomenclature	system of Classification
04	04	08	Dotanicai Nomenciature	(Up to series).

Name and Signature of HoD

DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERE) AUTONOMOUS)



PRINCIPAL
VIVERANAND COLLEGE, KOLHAPUR
2 (EMPOWERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Dr. Bhaurav Tukaram Dangat

Programme: B. Sc. II

Semester: III

Subject: Botany (Major)

Course Title: "DSC03BOT32: "Diversity of Phanerogams"

N	Month: July		Module/Unit:	Sub-units Planned
Lectures	Practical's	Total	Unit- 3: Angiosperms	Introduction, Habit and Habitat diversity, Methods of
04	04	08	8	reproduction
Mo	onth: Augus	t	Module/Unit:	Sub-units Planned
Lectures	Practical's	Total		Evolutionary history, Taxonomic hierarchy,
04	04	08	Unit- 3: Angiosperms	Bentham and Hooker System of Classification (Merit and Demerit),
Mon	th: Septemb	er	Module/Unit:	Sub-units Planned
Lectures	Practical's	Total	Unit- 3: Angiosperms	Difference between Dicot and Monocot plant,
04	04	08		*
			>	
Mo	Month: October		Module/Unit:	Sub-units Planned
Lectures	Practical's	Total	Unit- 3: Angiosperms	Study of Sunflower and Maize root and stem.
02	-	02	2:	

Name and Signature of HoD

DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE KOLHAPUR

ESTD JUNE 1964

VIVEKANAND COLLEGE, KOLHAPUR LEMPOWERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Dr. Bhaurav Tukaram Dangat

Programme: B. Sc. I

Semester: I

Subject: Botany

Course Title: "Plant Morphology"

M	onth: Augus	it	Module/Unit:	Sub-units planned
Lectures	Practical's	Total	II. it I. C I	Root system –
			Unit I: General organization of plant body:	Introduction, types and
04	04	08	Table 1	modification of
				Shoot system -
				Introduction and
				modification of stem
Mon	th: Septemb	er	Module/Unit:	Sub-units planned
Lectures	Practical's	Total	Unit I: General organization of	Leaf – Introduction,
			plant body:	Types- Simple and
04	04	08		Complex, Phyllotaxy,
			*	Leaf venation,
				Modification
Mo	nth: Octobe	r	Module/Unit:	Sub-units planned
Lectures	Practical's	Total	TI LIVE CO. I AV C	Definition and characters,
Lectures	Practical s	Total	Unit II: Study of Inflorescence	types of inflorescence
0.5	0.4	00		and significance of
05	04	09		inflorescence.

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



PRINCIPAL
VIVEKANAND COCLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Dr. Bhaurav Tukaram Dangat

Programme: B. Sc. III

Semester: VI

Subject: Botany

Course Title: "Genetics and Plant Breeding & Biostatistics, Economic Botany and Ethno botany"

Month: December		ber	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Section I: Genetics and	4a: Introduction and objectives,
			Plant Breeding	Plant genetic resources, Centers
04	05	09		of origin and Domestication of
			Unit IV:	crop plants
			Plant Breeding.	(6
Mo	nth: Janua	ry	Module/Unit:	Sub-units planned
Lectures	Practical	Total		4b: Methods of crop
			Unit IV:	improvements. Methods of
04	05	09	Plant Breeding.	Breeding.
Mor	th: Februa	ary	Module/Unit:	Sub-units planned
				Selection methods for self-
04	05	09	Unit IV:	pollinated, cross pollinated and
			Plant Breeding.	vegetative propagated plants.
Mo	Month: March		Module/Unit:	Sub-units planned
			Unit IV:	Mutation breeding
04	05	09	Plant Breeding.	

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



Principal
PRINCIPAL
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Academic Year: 2023-2025

Name of the teacher: Dr. Bhaurav Tukaram Dangat

Programme: B. Sc. II

Semester: IV

Subject: Botany (Minor)

Course Title: MIN03BOT41: Diversity of flowering plant

Month: January			Module/Unit:	Sub-units planned
Lectures	Practical's	Total	Unit- 3: Angiosperms	Introduction, Habit and Habitat diversity,
04	04	08		Methods of reproduction.
Mo	nth: Februa	ry	Module/Unit:	Sub-units planned
Lectures	Practical's	Total		Evolutionary history,
Lectures	1 ractical 5	Total	Unit- 3: Angiosperms	Taxonomic hierarchy,
04	04	08		Bentham and Hooker
				System of Classification
			1	(Merit and Demerit).
M	onth: March	1	Module/Unit:	Sub-units planned
				Difference between Dicot
Lectures	Practical's	Total	Unit- 3: Angiosperms	and Monocot plant,
0.4	0.4	0.0		Study of Sunflower and
04	04	08		Maize root and stem.

Name and Signature of HoL

DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

ESTD JUNE 1964

PRINGIPAL
VIVEKANAND COLLEGE, KOLHAPUP
(EMPOWERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Dr. Bhaurav Tukaram Dangat

Programme: B. Sc. I

Semester: II

Subject: Botany

Course Title: DSC-III: 2DSC03BOT21: Reproductive Botany

Month: January			Module/Unit:	Sub-units planned
Lectures	Practical's	Total	Unit-4: Endosperm and	Introduction, Development of endosperm, Types of
04	04	08	Embryo:	endosperms
Mo	nth: Februa	ry	Module/Unit:	Sub-units planned
Lectures	Practical's	Total	Unit-4: Endosperm and Embryo:	Embryogeny. Structure of dicot and monocot embryo.
04	04	08		
М	onth: March	1	Module/Unit:	Sub-units planned
Lectures	Practical's	Total	Unit-4: Endosperm and Embryo:	Seed formation, Polyembryony.
04	04	08		

Name and Signature of HoD

DEPARTMENT OF BOTAN:
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ESTD JUNE 1964 \*\*

PRINCIPAL
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

Programme: B. Sc. I

Semester: I

Subject: Botany

Course Title: "Plant Morphology"

M	Ionth: July		Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit III: Study of Flower	3a. Definition and parts of a typical flower
04	00	04		3b.Symmetry and insertion of floral whorls.
Mo	onth: Augus	st	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit III: Study of Flower	3c. Calyx and Corolla 3d. Perianth - types
04	04	08	Practical I	
Mon	th: Septem	ber	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit III: Study of Flower  Practica I	3e. Androecium- parts and types 3f. Gynoecium -parts,
04	04	08	1 lactica 1	arrangement and types of placentation.
Мо	nth: Octob	er	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit IV: Study of Fruit  Practica I	4a. Introduction and types with one example each.
04	04	08		

(Dr. A. R. Kasaskar Name and Signature of Teacher ESTD JUNE 1964

Name and Signature of HoD

Academic Year: 2024-2025

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

Programme: B. Sc. II

Semester: III

Subject: Botany (DSC03BOT32)

Course Title: "Diversity of Phanerogams"

Month: August			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit I: Phanerogams	1. Introduction, Distinguishing characters
04	02	06	Practical I	of Gymnosperms and Angiosperms.
Mon	th: Septem	ber	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit IV: Taxonomic Importance	4. Morphology, Anatomy,
04	04	08	Practical I	Chemotaxonomy and Palynology. Cytotaxonomy, Chemotaxonomy,
Мо	nth: Octobe	er	Module/Unit:	Numerical Taxonomy.  Sub-units planned
Lectures	Practicals	Total	Unit IV: Taxonomic Importance	4.Molecular taxonomy and DNA barcoding of
03	03	06	Practical I	plants. Herbaria, Herbarium technique and Digital herbaria.

(Dr. A. R. Kasaskar) Name and Signature of Teacher ESTD JUNE 1964

Name and Signature of HoD

Academic Year: 2024-2025

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

Programme: B. Sc. II

Semester: III

Subject: Botany (MIN03BOT32)

Course Title: "Plant Taxonomy"

Month: August			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit IV: Taxonomic Literature	4. Flora, Manuals, Monographs, eflora,
04	02	06	Practical I	Revisions, Journals.
Mon	th: Septem	ber	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit IV: Taxonomic Literature	4. Periodicals, Reference Books, Research paper,
04	04	08	Practical I	Websites and Catalogues.
Mo	nth: Octob	er	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit IV: Taxonomic Literature	4. Plant Families : Malavaceae and
03	03	06	Practical I	Amaryllidaceae

(Dr. A. R. Kasaskar)

Name and Signature of Teacher

Name and Signature of HoD

(Dr. B. F. Dangat

Academic Year: 2024-2025

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

Programme: B. Sc. III

Semester: V

Subject: Botany

Course Title: "Plant Pathology and Biofertiizers" and "Plant Systematics and

Paleobotany"

Mo	onth: Augus	st	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section : II Unit III: Plant Families	3a. Study of plant families : Anacardiaceae,
04	04	08	Practical II	Fabaceae ,Apiaceae, Rubiaceae
Mon	th: Septem	ber	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit III: Plant Families Unit IV : Biofertilizer	3a. Study of plant families : Achanthaceae,
04	04	08	Practical II	Euphorbiaceae and Poaceae 4a. Microbes in Agriculture
Mo	nth: Octob	er	Module/Unit:	Sub-units planned
04	04	08	Unit IV : Biofertilizer Practical II	4b. Organic Farming

(Dr. A. R. Kasarkar)

Name and Signature of Teacher

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ESTD JUNE 1964

Name and Signature of HoD

Academic Year: 2024-2025

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

Programme: B. Sc. I

Semester: II

Subject: Botany

Course Title: DSC03BOT21: "Reproductive Botany" &

DSC03BOT22: "Diversity and Conservation of plants"

Mor	nth: Decem	ber	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit II: Study of	Studyof microsporangium,
04	05	09	Microsporogenesis	StudyofAnther (Structure and Dehiscence)
			Practical : II	
Mo	nth: Janua	ry	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit II: Study of	Study of microsporogenesis, study
04	04	08	Microsporogenesis  Practical - II	of pollen grain, study of male gametophyte development
Mon	th: Februa	ıry	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit II: Domains of Life	Study of three domains of life = Archaea,
04	04	08	Practical - II	Bacteria and Eukarya
Month: March			Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit II: Domains of Life	Study of three domains of life – Archaea,
03	02	05	Practical - II	Bacteria and Eukarya

Name and Signature of Teacher

(Dr. Abhijeet R. Kasarkar)

ESTO JUNE

Name and Signature of HOD

Academic Year: 2024-2025

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

Programme: B. Sc. II

Semester: IV

Subject: Botany

Course Title: DSC03BOT41 "Resource Botany" & DSC03BOT42 "Industrial Botany"

Mon	th: Decem	ber	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit III: Extraction of sugar from sugar cane	Critical study of the steps involved, problems faced
02	02	04	DSC - Practical	by the sugar industry in India.
Month: January			Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit III: Extraction of sugar from sugar cane	By products of sugar industry, Distillation of
05	04	09	DSC - Practical	alcohol and other products with special reference to distilleries in Maharashtra.
Mor	th: Februa	ry	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit IV: Bio- fuel technology	Introduction and advantages, Concept of
04	04	08	DSC - Practical	Bio-fuel and its need.
Month: March			Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit IV: Bio- fuel technology	Plants used for Bio-fuel production, Biodiesel
04	02	06	DSC - Practical	production from castor.

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

ESTD JUNE 1964

Name and Signature of HOD

Academic Year: 2024-2025

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

Programme: B. Sc. II

Semester: IV

Subject: Botany

Course Title: MIN03BOT41 "Diversity of flowering plant"

Mon	th: Decemi	oer	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit IV: Taxonomic Importance	Morphology, Anatomy, Chemotaxonomy
02	00	02		
Mo	nth: Janua	ry	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit IV: Taxonomic Importance	Palynology, Brief introduction to
05	00	05		Cytotaxonomy, Chemotaxonomy, Numerical taxonomy
Mor	nth: Februa	ry	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit IV: Taxonomic Importance	Molecular taxonomy and DNA Barcoding of
04	00	04		plants.
Me	onth: Marc	h	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit IV: Taxonomic Importance	Herbaria, Herbarium technique and Digital
04	00	04		Herbaria.

Name and Signature of Teacher

(Dr. A. R. Kasarkar)

Name and Signature of HOI

Academic Year: 2024-2025

Name of the teacher: Dr. Abhijeet Rajaram Kasarkar

Programme: B. Sc. III

Semester: VI

Subject: Botany

Course Title: DSE 7 F2 Section II: "Horticulture, Forestry and Herbal Technology"

Mon	th: Novemb	per	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Section II: Unit II: Gardening and	2a.Introduction, Definition
03	03	06	Ornamental Plants  Practical: II	2a.Objectives, Types of Gardening
Mon	th: Decemb	er	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Section II: Unit II: Gardening and	2a. Types of Gardening, Importance and
05	04	09	Ornamental Plants  Practical: II	Landscape garden
Moi	nth: Januar	y	Module/Unit:	Sub-units planned
03	03	06	Section II: Unit II: Gardening and Ornamental Plants	2b.Ornamental plants: Herbs, Shrubs, Trees, Indoor plants.
			Practical: II	
Mon	th: Februa	ry	Module/Unit:	Sub-units planned
04	04	08	Section II: Unit II: Gardening and Ornamental Plants	2b.Study of Lawn and Climber
			Practical: II	

Name and Signature of Teacher

(Dr. A. R. Kasarkar)

ESTD JUNE 1964

Name and Signature of HOD

Academic Year: 2024-2025

Name of the teacher: Dr. Sarika Deepak Patil.

Programme: B. Sc. I

Semester: I

Subject: Botany

Course Title: "Indian Knowledge System" IKS: IKS03GEC11

Month: August			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit-1: Introduction to Ayurveda	1a. Ayurvedic medicinal system
03	00	03		1b. Principles of Ayurveda (Vata, Pitta, Kapha)
Mon	th: Septeml	oer	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit-1: Introduction to	1c. Ayurvedic therapies 1d. Unani system of
04	00	04	Ayurveda.	medicine 1e. Siddha system of medicine
Month: October		er	Module/Unit:	Sub-units planned
03	00	03	Unit-1: Introduction to Ayurveda.	1f. Future of herbal drugs 1g. Study of medicinal plants- Punarnava, Vasaka, Shatavar, Brahmi and Arjuna
	:			Drailini and Arjuna

Name and Signature of Teacher

Name and Signature of HoD

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Dr. Sarika Deepak Patil.

Programme: B. Sc. I

Semester: I

Subject: Botany

Course Title: "DSC BOT- PR-I: 2DSC03BOT29: DSC"

Month: August			Month: August Module/Unit:	
Lectures	Practicals	Total	Practicals -I	Sub-units planned
	02			<ol> <li>Study of Microscope and its parts.</li> <li>Study of Nostoc.</li> <li>Study of Mucor</li> </ol>
Mon	nth: Septem	ber	Mr. I	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practicals -I	pauned
: <del></del>	04		Tracticals -1	<ul><li>4) Study of Moss.</li><li>5) Study of Pteris.</li><li>6) Study of Cycas.</li></ul>
Mo	nth: Octobe	r		7) Study of Hibiscus.  Sub-units planned
			Module/Unit:	
ectures	Practicals	Total	Droot: 1 Y	units planned
	04		Practicals -I	8) Study of different types of tissue – Simple and Complex.
				9) Study of types of seed – Dicot and Monocot.

( Do. Sanika D. Patil.)

Name and Signature of Teacher

ESTD JUNE 19604 F

Name and Signature of HoD

#### 1

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

Academic Year: 2024-2025

Name of the teacher: Dr. Sarika Deepak Patil.

Programme: B. Sc. II

Semester: III

Subject: Botany (Minor)

Course Title: "MIN03BOT31: Diversity in non-flowering plant"

	Month: Ju	У	Diversity in non-flowering  Module/Unit:	
Lectures	Practicals	Total		Sub-units planned
02	05	07	Unit -3: Bryophyta:	Introduction, Distribution in India, Range of Thallus organization,
Mo	onth: Augus	it	Module/Unit:	S === Lation,
Lectures	Practicals	TD .	unit;	Sub-units planned
	Tracticals	Total Unit 2. D.	Unit _3. D.	Methods of reproducti
03	06	09	Unit -3: Bryophyta	according to Paribar
Montl	1: Septembe	r		(1965),
			Module/Unit:	Sub-units planned
03	06			
	00	09	Unit -3: Bryophyta	Study of example with reference to occurrence, plant body and life cycle of Riccia and Anthoceros.

(Bo Sorika D. Patil.)
Name and Signature of Teacher



Name and Signature of HoD

Academic Year: 2024-2025

Name of the teacher: Dr. Sarika Deepak Patil.

Programme: B. Sc. II

Semester: III

Subject: Botany (Major)

Course Title: "DSC03BOT31: Diversity of Cryptogams"

	Month: Jul	y	Module/Unit:	Sub-units Planned
Lectures	Practicals	Total		Introduction, Distributio
02	00	02	Unit -3: Bryophyta	in India, Range of Thallus organization,
Mo	onth: Augus	it	Module/Unit:	Sub-units Planned
Lectures	Practicals	Total	Unit 2. D	Methods of reproduction
03	00	03	Unit -3: Bryophyta	Outline classification according to Parihar (1965),
Mont	h: Septemb	er	Module/Unit:	Sub-units Planned
03	00	03	Unit -3: Bryophyta	Study of example with reference to occurrence, plant body and life cycle of <i>Riccia</i> and <i>Anthoceros</i> .

(Do. sorika D. Patil)

Name and Signature of Teacher



Name and Signature of HoD

Academic Year: 2024-2025

Name of the teacher: Dr. Sarika Deepak Patil

Programme: B. Sc. III

Semester: V

Subject: Botany

Course Title: "Paper - V "Biochemistry and Stress Physiology & Plants Systematics and Pale botany" (DSE - 1007 E3) Section I: Biochemistry and Stress Physiology"

- July		uly	Module/Unit:	Sub-units planned
Lectures	Lectures Practical Tota		al Unit:1 Plant Biochemistry	1a:Introduction
02	00	07	Carbohydrate metabolism on	classification Carbohydrates  1b: Properties Monosaccharide,
$\mathbf{M_0}$	nth: Augi	ıst	Module/Unit:	
			Module, Unit:	Sub-units planned
Lectures	Practical	Total		Oligosaccharides,
05	04	10	Unit:1  Plant Biochemistry Carbohydrate metabolism and Practical: I (DSE7E1) Section: I Section: II Cytology and Research Techniques in Life Sciences Microbiology, Plant Pathology and Bio fertilizers	Polysaccharides. 1c: Significance of Carbohydrate Protein metabolism.
Manage	: Septemb	er	Module/Unit:	Sub-units planned
06	04	12	Unit:1 Plant Biochemistry- Carbohydrate metabolism and Practical: I (DSE7E1) Section: I Section: II Cytology and Research Techniques in Life Sciences Microbiology, Plant Pathology and Bio fertilizers	1d:Introduction, properties and characters of amino acids



Month: October			Module/Unit:	Sub-units planned
03	06	09	Plant Biochemistry- Carbohydrate metabolism and Practical: I (DSE7E1) Section: I Section: II Cytology and Research Techniques in Life Sciences Microbiology, Plant Pathology and Bio fertilizers	1e:Protein-structure and classification 1f:Protein synthesis

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(Dr. Sarika D. Patil.)

Name and Signature of Teacher

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Name and Signature of HOD

#### Vivekanand College, Kolhapur (Empowered Autonomous)

#### Department of Botany Annual Teaching Plan

Academic Year: 2024-2025

Name of the teacher: Dr. Annapurna Ram Alvikar

Programme: B. Sc. III

Semester: V

Subject: Botany

Course Title: "Plant Biochemistry and Stress Physiology"

Month:	July		Module/Unit:	Cub
Lectures	Practicals	Total	Paper: DSE 7 E2	Sub-units planned  3a: Introduction an
02		02	Section I: Unit 3 – Stress Physiology	Defining plant stress, Water stress
Month:	August		Module/Unit:	
Lectures			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper: DSE 7 E2	
05		05	Section I: Unit 3 – Stress Physiology	3b: Temperature stress, Salinity stress 3c: Stress sensing mechanism
Month:	September		Module/Unit:	Sub-units planned
06		06	Paper: DSE 7 E2 Section I: Unit 4 – Senescence and Aging  Paper: DSE 7 E2 Section II: Unit 1 – Importance of Plant Systematics	<ul> <li>4a: Introduction, Patterns of senescence</li> <li>4b: Physical changes during senescence.</li> <li>4c: Control of senescence</li> </ul>
Ionth : O	ctober		Module/Unit:	Sub-units planned
04		04	Paper: DSE 7 E2 Section II : Unit 1 — Importance of Plant Systematics	1a: Evidences from Palenology, Cytology Phytochemistry and Molecular data

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



Name and Signature of HoD

DEPARTMEN DE BOTANT
VIVERARAND COLLEGE, KOLHAPUR
VENDOUWERED ANTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Dr. Annapurna Ram Alvikar

Programme: B. Sc. II (Major)

Semester: III

Subject: Botany

Course Title: "Diversity of Cryptogams"

Month			Module/Unit:	
Lecture	s Practical'	Tota		Sub-units planned
02	00	02	Unit 4: Pteridophytes	4a. Introduction, Distribution in India
Month:	August		Modul III	
Lectures	Practical's	Total	Module/Unit:	Sub-units planned
04	00	04	DSC03BOT31 Unit 4: Pteridophytes	4b. Methods of reproduction, Outline of classification according to Smith, Occurance, Plant body and life cycle of Selaginella
vionth : ;	September		Module/Unit:	
04	00	04	DSC03BOT31 Unit 4: Pteridophytes	Occurance, Plant body and life cycle of Azolla Heterospory.
			DSC03BOT32 "Diversity of Phanerogams" Unit 4: Taxonomic Importance	Molecular taxonomy and DNA Barcoding of plants.
onth : Oc	tober	1	Module/Unit:	
04	00	04	OSC03BOT32 Diversity of Phanerogams" Init 4: Taxonomic Importance	Sub-units planned  Herbarium techanique and Digital herbaria.

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



Name and Signature of HoD

WVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Dr. Annapurna R. Alvikar

Programme: B. Sc. II (Minor)

Subject: Botany

Semester: III

Course Title: "Diversity in Non- flowering plant"

Month	July		Module/Unit:	
Lectures	Practical'	s To	tal	Sub-units planned
02	00	02	MIN03BOT31 Unit 4: Pteridophytes	4a. Introduction, Distribution in India
Month:	August		Module/Unit:	
Lectures	Practical's	Tota	1	Sub-units planned
04	02	06	MIN03BOT31 Unit 4: Pteridophytes	Methods reproduction, Outline of classification according to Smith, Occurance Plant
Month: S	eptember		Module/Unit:	Selaginella
04	04	08	MIN03BOT31 Unit 4: Pteridophytes	life cycle of Selaginella.  Occurance, Plant body and life cycle of Azolla
onth : Oct	ober	=	Module/Unit:	
04	04	08	MIN03BOT31 Unit 4: Pteridophytes	Occurance, Plant body and life cycle of Azolla. Heterospory

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



Name and Signature of HoD

Academic Year: 2024-2025

Name of the teacher: Dr. Annapurna Ram Alvikar

Programme: B. Sc. I

Semester: I

Subject: Botany

Course Title: Practical's

Month: July			Module/Unit:	S-1
Lectures	Practical's	Total	==3, C III.	Sub-units planned
**	02	02		
Month:	August		Module/Unit:	Sub units at
Lectures	Practicals	Total		Sub-units planned
	04	04		
Month: S	September		Module/Unit:	
	04	04	oute out.	Sub-units planned
		04		
Ionth : O	ctober		Module/Unit:	Sub-units planned
	04	04	1445 155 15	

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



Name and Signature of HoD

DEPARTMENT OF BOTANY

VIVEKANAND COLLEGE, KOLHAPUR

CAMPOWERED AUTONOMOUS

#### Vivekanand College, Kolhapur (Empowered Autonomous) Department of Botany

**Annual Teaching Plan** 

Academic Year: 2024-2025

Name of the teacher: Dr. Annapurna Ram Alvikar

Programme: B. Sc I

Semester: II

Subject: Botany

Course Title: Practical's

Mon	th: Deceml	ber	Module/Unit:	Sub-units planned
Lectures	Practical's	Total		
(444)	03	03		
Month:	January		Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
	04	04	<b></b> :	
Month:	February	v-	Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
-	04	04		
Month:	Month: March		Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
	04	04	-	

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

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Name and Signature of HoD
DEPARTMENT A BOTTAN
VIVEKANAND COLVEGE, KOLHAPUR

(FMPOWERED AUTONOMOUS)

#### Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Botany Annual Teaching Plan

Academic Year: 2023-2024

Name of the teacher: Dr. Annapurna Ram Alvikar

Programme: B. Sc II Major

Semester: IV

Subject: Botany

Course Title: "Industrial Botany" (DSC03BOT42)

Month:	November		Module/Unit:	Sub-units planned
Lectures	Practical's	Total	Paper II-" Industrial Botany"	Introduction, Sources of natural dyes in India
01	00	01	Unit 3: Sources of Natural Dyes	natural dyes in India
Month:	December		Module/Unit:	Sub-units planned
Lectures	Practical's	Total		Sources of natural dyes
04	00	04	Paper II-" Industrial Botany" Unit 3: Sources of Natural Dyes	in India and their extraction methods
Month:	January		Module/Unit:	Sub-units planned
04	00	04	Paper II-" Industrial Botany" Unit 3: Sources of Natural Dyes  Paper II-" Industrial Botany" Unit 4: Importance of Seed Industry	Merits and limitations of plant based dyes.  Introduction, Importance of seed industry.
Month: 1	February		Module/Unit:	Sub-units planned
04	00	04	Paper II-" Industrial Botany" Unit 4: Importance of Seed Industry	Seed production, Seed processing and Marketing
Month : N	March		Module/Unit:	Sub-units planned
03	00	03	Paper II-" Industrial Botany" Unit 4: Importance of Seed Industry	Major seed industries and corporation of India

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

ESTD JUNE 1964

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EMPOWERED AUTONOMOUS

#### Vivekanandı College; Kolhapur (Empowered rad tonomous) u

Department of Botany
Annual Teaching Plan

Academic Year: 2023-2024

Name of the teacher: Dr. Annapurna Ram Alvikar

Programme: B. Sc II Minor Semester: IV

Subject: Botany Course Title: "Commercial Botany" (MIN03BOT42)

Month:	November		Module/Unit:	Sub-units planned
Lectures 01	Practical's	Total 01	Paper II-" Commercial Botany" Unit 3: Bryophyte and Pteridophytes	Introduction,
Month:	December		Module/Unit:	Sub-units planned
Lectures	Practical's	Total		
04	00	04	Paper II-" Commercial Botany" Unit 3: Bryophyte and Pteridophytes	Potential member, Products, processing and application of Moss
Month:	January		Module/Unit:	Sub-units planned
04	00	04	Paper II-" Commercial Botany" Unit 3: Bryophyte and Pteridophytes	Products, processing and application of <i>Marchantia</i> , Riccia Pteridophyte-Processing and application of Adiantus,
Month:	February		Module/Unit:	Sub-units planned
04	00	04	Paper II-" Commercial Botany" Unit 3: Bryophyte and Pteridophytes	Products, processing and application of Nephrolepis, Dryopteris, Polypodium Lycopodium.

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

ESTD JUNE 1964

Name and Signature of HoD

#### Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Botany Annual Teaching Plan

Academic Year: 2024-2025

Name of the teacher: Dr. Annapurna Ram Alvikar

Programme: B. Sc III

Semester: VI

Subject: Botany

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

Month:	December	(3)	Module/Unit:	Sub-units planned
Lectures 04	Practicals	Total 04	Paper: DSE 7 F1 Section I: Unit 1: Genetic Material	1a: Introduction, Nucleic Acids(DNA, RNA)
Month:	January		Module/Unit:	Sub-units planned
Lectures	Practicals	Total		1b:Griffth'sandAvery'strans formation experiment,
04		04	Paper: DSE 7 F1 Section I: Unit 1: Genetic Material	Harshey-Chase bacteriophage experiment 1c:DNAstructure and Types of DNA
Month:	February	L	Module/Unit:	Sub-units planned
04		04	Paper: DSE 7 F1 Section I: Unit 1: Genetic Material  Paper: DSE 7 F2 Section II: Unit 1: Herbal Technology	1d: DNA replication 1e: Types of RNA  4a: Pharmacognosy – Introduction, Definition, Pharmacognosy techniques.
Month:	March		Module/Unit:	Sub-units planned
02		02		4b: Phytochemicals:     Alkaloids and Phenols 4c: Drug- Types and adulteration 4d: Scope of Pharmacognosy

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



Name and Signature of HoD

Academic Year: 2024-2025

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"

N	Ionth: July	у	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Section I:	Introduction, Eukaryotic cell components-Nucleus
02		05	Unit I1: Cell Organelles	
Mo	nth: Augu	ıst	Module/Unit:	Sub-units planned
Lectures	Practical	Total		Eukaryotic cell components-
05		05	Unit I1: Cell Organelles	Endoplasmic reticulum, Golgi complex Glyoxisomes, Peroxisomes and Lysosomes- Structure, composition and functions Specialized cell organelle- Ribosome
Mon	th: Septem	ber	Module/Unit:	Sub-units planned
06	<del>/-</del> (	06	Section I:	Radioactive isotopes, Introduction & examples
			Unit 4: Radiation Biology	Effect of radiations on Biological systems  Beneficial effects of
				Biological systems  Beneficial effects of radiations



Month: October			Module/Unit:	Sub-units planned
03		03	Section I:	Autoradiography Technique
			Unit 4: Radiation Biology	Geiger-Muller Experiment / Liquid Scintillation Counter
				Precautionary measures

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Name and Signature of Teacher

(Dr. Priya D. Patil)

Name and Signature of HoD

Academic Year: 2023-2024

Name of the teacher: Dr. Priya Digambar Patil

Programme: B. Sc. II

Semester: III

Subject: Botany (Major)

Course Title: "DSC03BOT31: Diversity of Cryptogams"

N	Ionth: July		Module/Unit:	Sub-units Planned		
Lectures	Practicals	Total	Unit I: Algae	Cryptogams: Introduction, General Characters		
03	≈ 1	03		Algae: Introduction		
Mo	onth: Augus	st	Module/Unit:	Sub-units Planned		
Lectures	Practicals	Total	Unit I: Algae	Range of Thallus organization		
05	-	05	<b>g</b>	Modes of reproduction  Classification of Algae (G. M. Smith)		
Mon	th: Septem	ber	Module/Unit:	Sub-units Planned		
05	-	05	Unit I: Algae	Study of example with reference to occurrence, plant body and life cycle of Spirogyra and Sargassum		
				Economic importance of Algae		
Mo	Month: October		Month: October Module		Module/Unit:	Sub-units Planned
02	-	02	Unit: I Gymnosperms	Pinus: Occurrence, habitat, vegetative structure, reproduction and Life cycle		

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

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Name and Signature of HoD

Academic Year: 2023-2024

Name of the teacher: Dr. Priya Digambar Patil

Programme: B. Sc. II

Semester: III

Subject: Botany (Minor)

Course Title: "MIN03BOT31: Diversity in non-flowering plant"

N	Ionth: July		Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Section II:	Cryptogams: Introduction, General
03	04	07	Unit I: Algae	Characters Algae: Introduction
Mo	onth: Augus	st	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit I: Algae	Range of Thallus organization
05	06	11		Modes of reproduction
				Classification of Algae (G. M. Smith)
Mon	th: Septem	ber	Module/Unit:	Sub-units planned
05	06	11	Unit I: Algae	Study of example with reference to occurrence, plant body and life cycle of Spirogyra and Sargassum
				Economic importance of Algae

Name and Signature of Teacher

(Dr. Priya D. Patil)

ESTD JUNE 1964

Name and Signature of HoD

Academic Year: 2024-2025

Name of the teacher: Dr. Priya Digambar Patil

Programme: B. Sc. I

Semester: I

Subject: Botany

Course Title: "Basics in Botany"

Month: August			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit II: General outline of	Study of characters of plant kingdom
03	04	07	plant kingdom	Study of classification of plant kingdom
Mon	th: Septem	ber	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit II: General outline of	Study of five divisions with respect to characters
04	06	10	plant kingdom	and economic importance
Mo	nth: Octobe	er	Module/Unit:	Sub-units planned
05	06	11	Unit IV: Organization of	Plant organs (Root, Stem and Leaf)
	( <b>4</b> )		higher plant body	Development of plant body Internal organization
				Study of tissue systems- Meristematic tissue, simple and complex tissue

Name and Signature of Teacher

(Dr. Priya D. Patil)

ESTD JUNE 1964

Name and Signature of HoD

Academic Year: 2024-2025

Name of the teacher: Dr. Priya Digambar Patil

Programme: B. Sc. I

Semester: I

Subject: Botany

Course Title: "OEC03LFS11: Herbal Cosmetics-I"

Month: August			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
•	02	02		
Мо	Month: September		Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
i <del>en</del> :	05	05		
M	Month: October		Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
	04	04		

Name and Signature of Teacher

(Dr. Priya D. Patil)

ESTD JUNE 1964 Name and Signature of HoD

Academic Year: 2024-2025

Name of the teacher: Dr. Priya Digambar Patil

Programme: B. Sc. III

Semester: VI

Subject: Botany

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

Month: December			Module/Unit:	Sub-units planned
Lectures 04	Practical	Total 00	Section I: Unit III: Genetic Engineering	Introduction, Methods of gene transfer: Agrobacterium mediated, Direct gene transfer by Electroporation, Microinjection, Microprojectile bambartment
Мо	nth: Janua	ry	Module/Unit	Sub-units planned
Lectures 05	Practical	Total 05	Unit I1I: Genetic Engineering	Transgenic plants (Bt cotton and Golden rice), Applications of genetic transformation. Blotting Techniques: Northern, Southern and DNA Fingerprinting
Mor	nth: Febru	ary	Module/Unit	Sub-units planned
04		04	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

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Name and Signature of Teacher

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Academic Year: 2024-2025

Name of the teacher: Dr. Priya Digambar Patil

Programme: B. Sc. II

Semester: III

Subject: Botany (Minor)

Course Title: "MIN03BOT41: Diversity of Flowering Plants" and

"MIN03BOT42: Commercial Botany"

Month: December		Module/Unit	Sub-units Planned	
Practicals	Total	Unit 2: Gymnosperms	Introduction, Distribution of	
-	02		Gymnosperms	
nth: Janua	ry	Module/Unit	Sub-units Planned	
Practicals	Total	Unit 2: Gymnosnerms	Methods of reproduction	
04	08	Can an Cymnosporms	Outline of classification system according to Sporne (1965)	
			Study of example with reference to occurrence, plant body and life cycle of <i>Pinus</i>	
th: Februa	ry	Module/Unit	Sub-units Planned	
03	07	Unit 2: Gymnosperms	Study of example with reference to occurrence, plant body and life cycle of <i>Gnetum</i>	
		Unit 4: Higher Plants	Introduction, Potential member, Products, Processing Applications of organisms (Future Prospects)  Gymnosperms: Cycas, Pinus	
	Practicals  oth: Januar  Practicals  04	Practicals Total  - 02  nth: January  Practicals Total  04 08  th: February	Practicals Total  O2  Inth: January  Module/Unit  Practicals Total  O4  O8  Unit 2: Gymnosperms  Module/Unit  Unit 2: Gymnosperms  Unit 2: Gymnosperms  Unit 2: Gymnosperms  O4  O7  Unit 2: Gymnosperms	

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M	onth: Marc	eh	Module/Unit	Sub-units Planned
04	04	08	Unit 4: Higher Plants	Potential member, Products, Processing Applications of organisms (Future Prospects) <b>Gymnosperms:</b> Gingko, Taxus <b>Angiosperms:</b> Aswahagandha, Ashoka, Plumbago, Costus

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Name and Signature of Teacher

Name and Signature of HoD

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DEPARTMENT OF BOTANY

VIVEKANAND COLVEGE, KOLHAPUR

(EMPOWERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Dr. Priya Digambar Patil

Programme: B. Sc. I

Semester: II

Subject: Botany

Course Title: "DSC03BOT21: Reproductive Botany" and

"DSC03BOT22: Diversity and Conservation of Plants"

Mor	ith: Decemb	er	Module/Unit	Sub-units planned	
Lectures	Practicals	Total	Unit 2: Megasporogenesis	Study of ovule, Types of ovules	
03	02	04		Study of megasporogenesis	
Mo	nth: Janua	ry	Module/Unit	Sub-units planned	
Lectures	Practicals	Total	Unit 2: Megasporogenesis	Study of typical embryo sac, Study of types of embryo	
05	05	10		sac: Monosporic ( <i>Polygonus</i> type), Bisporic ( <i>Allium</i> sp.) and Tetrasporic ( <i>Peperomia</i> type)	
Moi	nth: Februa	ry	Module/Unit	Sub-units planned	
04	04	08	Unit 4: Conservation of Plant Diversity	Introduction and definition Types of conservation (In situ and Ex situ)	
Month: March		h	Module/Unit	Sub-units planned	
02	02	04	Unit 4: Conservation of Plant Diversity	Necessity of conservation	

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Name and Signature of Teacher

Name and Signature of HoD

Academic Year: 2024-2025

Name of the teacher: Dr. Priya Digambar Patil

Programme: B. Sc. I

Semester: II

Subject: Botany

Course Title: "OEC03LFS21: Herbal Cosmetics-II"

M	onth: Janua	ry	Module/Unit	Sub-units planned	
Lectures	Practicals	Total			
	05	05			
Month: February			Module/Unit	Sub-units planned	
Lectures	Practicals	Total			
	04	04			
Month: March			Module/Unit	Sub-units planned	
Lectures	Practicals	Total			
-	03	03			

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Name and Signature of Teacher

Name and Signature of HoD

Department of Botany Annual Teaching Plan

Academic Year: 2024-2025

Name of the teacher: Dr. Mrunalini Nilesh Desai

Programme: B. Sc. III

Semester: VI

Subject: Botany

Course Title: DSE 7 F1 Section II: "Biostatistics, Economic Botany and Ethnobotany"

Month: November			Module/Unit:	Sub-units planned
Lectures	Practical	Total	Section II:	1a.Introduction, Statistical terms
03		03	Unit I: Biostatistics	1b. Sampling- Sampling methods
Mon	th: Decemb	er	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Section II: Unit I: Biostatistics	1c. Collection and Representation of data
05		05	Unit II: Economic Botany I	2a. Study of economical important plant with ref. to origin, morphology, part used and uses. 2b. Cereals- Barley and Oats
Mo	nth: Januai	у	Module/Unit:	Sub-units planned
03		03	Section II: Unit II: Economic Botany I	2c. Legumes- Soybean and Vigna
Mon	Month: February		Module/Unit:	Sub-units planned
04		04	Section II: Unit II: Economic Botany I	2d. Vegetables- Spinach 2e. Spices- Clove and black pepper

Name and Signature of Teacher

(Dr. Mrunalini N. Desai)

Name and Signature of HOD

Academic Year: 2024-2025

Name of the teacher: Dr. Mrunalini Nilesh Desai

Programme: B. Sc. II

Semester: IV

Subject: Botany

Course Title: DSC-VII: DSC03BOT41 "Resource Botany"

Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper I "Resource Botany"	Introduction and scope, Herbal preparations,
02		02	Unit II: Plant resources used in cosmetics, aromatics and pharmaceutics.	Methods of Extraction- Maceration, Digestion, Decoction, aromatic waste, Extracts and tinctures.
Мо	nth: Janua	ry	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper I "Resource Botany"	Study of 1. Aloe, 2. Heena,
05		05	Unit II: Plant resources used in cosmetics, aromatics and pharmaceutics.	3. Lemmon grass, 4. Rose 5. Jasmine
Moi	nth: Februa	ry	Module/Unit:	Sub-units planned
04		04	Paper I "Resource Botany"	6. Turmeric 7. Ginger 8. Neem
			Unit II: Plant resources used in cosmetics, aromatics and pharmaceutics.	9. Holy basil 10. Amla
Mo	onth: Marc	h	Module/Unit:	Sub-units planned
05		05	Paper II  "Industrial Botany"  Unit I: Physical characteristics of Indian woods.	Manufacturing of paper and board from raw plant material manufacturing of crude and high quality paper, recycled paper

Name and Signature of Teacher
(Or. Mrynolly N. Desay)

ESTD JUNE 1964

Name and Signature of HOD

Academic Year: 2024-2025

Name of the teacher: Dr. Mrunalini Nilesh Desai

Programme: B. Sc. II

Semester: IV

Subject: Botany

Course Title: MIN03BOT41 and MIN03BOT42

Month: January			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
	04	04		
Moi	Month: February		Module/Unit:	Sub-units planned
	03	03		
Mo	onth: Marc	h	Module/Unit:	Sub-units planned
	04	04		

Name and Signature of Teacher (Dy. Mrynalini N. Desui)

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Name and Signature of HOD

Academic Year: 2024-2025

Name of the teacher: Dr. Mrunalini Nilesh Desai

Programme: B. Sc. I

Semester: II

Subject: Botany

Course Title: DSC BOT- PR-II: DSC03BOT19: DSC BOTANY LAB- 2

Mor	th: Decemb	er	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	##A
-	02	02		
Mo	nth: Janua	ry	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	
	05	05		
Moi	nth: Februa	ry	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	
	04	04		
Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	
	02	02		

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

Name and Signature of HOD

Academic Year: 2024-2025

Name of the teacher: Dr. Mrunalini Nilesh Desai

Programme: B. Sc. I

Semester: II

Subject: Botany

Course Title: "Open Elective" Practical - II ("OECOLFS21: Herbal Cosmetics-II")

Month: January			Month: January Module/Unit:	
Lectures	Practicals	Total	Practical - II	Preparation of mehandi Study of extraction and
	05	05		application of natural dyes Study of preparation of organic soaps.
Moi	ith: Februa	ry	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	Study of preparation of dhoop and agarbati.
	04	04		Study of preparation of beverages.  Best from Waste Study of preparation of wheat grass juice
Month: March		h	Module/Unit:	Sub-units planned
	03	03	Practical - Π	DIY Study of preparation of Ayurvedic juices

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

Name and Signature of HOD

## Vivekanand College, Kolhapur (Autonomous) Department of Botany

**Annual Teaching Plan** 

Academic Year: 2024-2025

Name of the teacher: Dr. Mrunalini Nilesh Desai

Programme: B. Sc. III

Semester: V

Subject: Botany

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

Pathology and Biofertilizers" (DSE7E1)

M	lonth: July	7	Module/Unit:	Sub-units planned
04		04	Section II: Unit I1I: Study of Plant Diseases	Introduction, Cereals: Rust of Wheat
Mo	nth: Augu	st	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Section II:	Cash crop: Red Rot of Sugarcane
05		05	Unit I1I: Study of Plant Diseases	Legume: Wilt of Gram Spices: Leaf spot of Black Peeper
Mon	th: Septem	ber	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Unit I1I: Study of Plant Diseases	Vegetable: Onion Smut Fruit: Apple Scab
05	==	05	Unit I1: Plant Pathology	Classification of plant diseases based on pathogen, crops and symptoms.
Mo	nth: Octob	er	Module/Unit:	Sub-units planned
04		04	Unit I1: Plant Pathology	Study of mechanism of Infection in disease development, prevention and control of plant diseases. Role of Quarantine.
				Significance of Plant Pathology.

Name and Signature of Teacher
(Dy. Mry notini N. Desci)

ESTD JUNE 1964

Name and Signature of HoD

DEPARTM VIVEKANAND COLLEGE, KOLHAPUF (EMPOWERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Dr. Mrunalini Nilesh Desai

Programme: B. Sc. II (Major) Semester: III

Course Title: "Diversity of Cryptogams" (DSC-V: DSCBOT31) Subject: Botany

N	Ionth: July		Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit II: Fungi	Introduction, Habit
04		04		(Types of mycellium), Mode of Nutrition. Methods of reproduction.
Mo	onth: Augus	st	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit II: Fungi	Outline of classification according to Alexopoulous
04		04		and Mims (1979). Economic importance of Fungi.
Mon	th: Septem	ber	Module/Unit:	Sub-units planned
04		04	Unit II: Fungi	Rhizopus - occurance, plant body and life cycle Puccinia - occurance, plant body and life cycle
Mo	nth: Octobe	er	Module/Unit:	Sub-units planned
04		04	"Diversity of Phanerogams"	Introduction, Distribution
			(DSC-VI: DSCBOT32)	in India, Methods of reproduction.
			Unit II:Gymnosperms	Outline of classification according to Sporne(1965)

Name and Signature of Teacher
(Dr. Mrunalini Desai)

Name and

Academic Year: 2024-2025

Name of the teacher: Dr. Mrunalini Nilesh Desai

Programme: B. Sc. II (Minor)

Semester: III

Subject: Botany Course Title: "Diversity in non flowering plants" (DSC-VI: DSCBOT32)

N	Ionth: July		Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit II: Fungi	Introduction, Habit
02		02		(Types of mycellium), Mode of Nutrition. Methods of reproduction.
Mo	onth: Augus	st	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit II: Fungi	Outline of classification according to
03	02	05		Alexopoulous and Mims (1979).
Mon	th: Septem	ber	Module/Unit:	Sub-units planned
04	04	08	Unit II: Fungi	Rhizopus - occurance, plant body and life cycle
Мо	nth: Octobe	er	Module/Unit:	Sub-units planned
04	04	08	Unit II: Fungi	Puccinia - occurance, plant body and life cycle Economic importance of Fungi.

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



Name and Signature of HoD

#### Vivekanand College, Kolhapur (Autonomous)

# Department of Botany Annual Teaching Plan

Academic Year: 2024-2025

Name of the teacher: Dr. Mrunalini Nilesh Desai

Programme: B. Sc. II

Semester: III

Subject: Botany

Course Title: VSC-PR-II: "Bonsai and Terrarium" (VSC03BOT31)

Мо	nth: Augus	t	Module/Unit:	Sub-units planned
Lectures	Practical	Total		
	02	02	Practical-I	
Mont	th: Septemb	er	Module/Unit:	Sub-units planned
	04	04	Practical-I	
Moi	nth: Octobe	r	Module/Unit:	Sub-units planned
24	04	04	Practical-I	

Name and Signature of Teacher

(Dr. Mrunolini N. Desai)

ESTD JUNE 1964

Name and Signature of HoD

#### Department of Botany **Annual Teaching Plan**

Academic Year: 2024-2025

Name of the teacher: Dr. Mrunalini Nilesh Desai

Programme: B. Sc. I

Semester: I

Subject: Botany

Course Title: "Basic in Botany" (DSC03BOT11)

nth: Augus	t	Module/Unit:	Sub-units planned
Practical	Total		
02	02	Practical-I	
h: Septemb	er	Module/Unit:	Sub-units planned
04	04	Practical-I	
ith: Octobe	r	Module/Unit:	Sub-units planned
04	04	Practical-I	
	Practical  02  h: Septemb  04  th: Octobe	02 02  h: September  04 04  th: October	Practical Total  02 02 Practical-I  h: September Module/Unit:  04 04 Practical-I  th: October Module/Unit:

Name and Signature of Teacher
(Dr. Mrunalini Desai)

gnature of HoD Name and

# Department of Botany Annual Teaching Plan

Academic Year: 2024-2025

Name of the teacher: Dr. Snehal Sanjay Wadkar

Programme: B. Sc. I

Semester: I

Subject: Botany

Course Title: "Basic in Botany" (DSC03BOT11)

Mo	onth: Augus	t	Module/Unit:	Sub-units planned
Lectures	Practical	Total		
in the state of th	02	02	Practical-I	
Mon	th: Septemb	) Der	Module/Unit:	Sub-units planned
<b>515</b> 18	04	04	Practical-I	
Mo	nth: Octobe	er	Module/Unit:	Sub-units planned
42	04	04	Practical-I	

Name and Signature of Teacher

(Dr. Snehal S. Wadkar)

Name and Signature of HoD



Academic Year: 2023-2024

Name of the teacher: Dr. Snehal Sanjay Wadkar

Programme: B. Sc. II (Minor)

Semester: III

Subject: Botany Course Title: "Plant Taxonomy" (MIN 03BOT32)

N	Aonth: July		Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit I: Introductory	Introduction, Importance of Taxonomy
02		02	Taxonomy	
Mo	onth: Augus	st	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit I: Introductory	Functions of Taxonomy- Identification, Nomenclature, Classification, Ranks, Categories and Taxonomic groups.  Sub-units planned  Herbarium- Introduction, Roles and Significance
03	02	05	Taxonomy	Classification, Ranks, Categories and
Mon	th: Septem	ber	Module/Unit:	Sub-units planned
04	04	08	Unit III: Tools for Taxonomic Studies	,
Mo	nth: Octobe	er	Module/Unit:	Sub-units planned
03	04	05	Unit III: Tools for Taxonomic Studies	Sir. J.C. Bose Botanical Garden, Calcutta, Kew Botanical Garden, Kew., Lead Botanical Garden, Shivaji University, Kolhapur.

Name and Signature of Teacher

(Dr. Snehal S. Wadkar)

Name and Signature of HoD
DEPARTMENT OF BOTOM
VIVEKANAND COLVEGE, KOLHAPPEN
(AUTOMOMOUS)

# Department of Botany Annual Teaching Plan

Academic Year: 2024-2025

Name of the teacher: Dr. Snehal Sanjay Wadkar

Programme: B. Sc. II

**Semester: III** 

Subject: Botany

Course Title: VSC-PR-II: "Bonsai and Terrarium" (VSC03BOT31)

Мо	nth: Augus	t	Module/Unit:	Sub-units planned
Lectures	Practical	Total		
	02	02	Practical-I	
Mon	th: Septemb	er	Module/Unit:	Sub-units planned
	04	04	Practical-I	
Moi	nth: Octobe	r	Module/Unit:	Sub-units planned
	04	04	Practical-I	

Name and Signature of Teacher

(Dr. Snehal S. Woodkar)

Name and Signature of HoD

DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPHY
(AUTONOMOUS)

Academic Year: 2023-2024

Name of the teacher: Dr. Snehal Sanjay Wadkar

Programme: B. Sc. III

Semester: V

Subject: Botany

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

Pathology and Biofertilizers" (DSE7E1)

"Plant Biochemistry and Stress Physiology & Plants Systematics and Paleobotany" (DSE7E1)

Ionth: July	7	Module/Unit:	Sub-units planned
	04	Section I:  Unit III: Analytical Techniques in Plant Sciences	Principals of Microscopy - Light Microscopy, Fluorescence and Electron( TEM and SEM) Microscopy.
onth: Augu	st	Module/Unit:	Sub-units planned
Practical	Total	Section I:	Chromatography Principals-Paper
03	08	Unit III: Analytical Techniques in Plant Sciences	Chromatography, TLC, HPLC
th: Septem	ber	Module/Unit:	Sub-units planned
Practical	Total	Section- I	Introduction and Classification of Lipids,
04	08	Unit II: Lipid Metabolism and Fatty acid metabolism	Properties of Fatty acids (Saturated Fatty acids, Unsaturated Fatty acids)
nth: Octob	er	Module/Unit:	Sub-units planned
03	08	Section- I Unit II: Lipid Metabolism and	Beta oxidation, Gluconeogenesis and role in mobilization of fatty acids during germination, Significance of lipids.
	Practical  O3  th: Septem  Practical  O4	Practical Total  03 08  th: September  Practical Total  04 08  nth: October	Section I:  Unit III: Analytical Techniques in Plant Sciences  Module/Unit:  Practical Total Section I:  Unit III: Analytical Techniques in Plant Sciences  th: September Module/Unit:  Practical Total Section-I  Unit II: Lipid Metabolism and Fatty acid metabolism  nth: October Module/Unit:  03 08 Section-I  Section-I  Section-I  Section-I  Section-I  Section-I

Name and Signature of Teacher

(Dr. Snehal S. Wadkar)

ESTD JUNE 1964 1964

DEPARTMENT OF BOTALY
VINEKANAND COLLEGE, TOLHAPUR
(AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Dr. Snehal Sanjay Wadkar

Programme: B. Sc. I

Semester: II

Subject: Botany

Course Title: "DSC-III: 2DSC03BOT21: Reproductive Botany"

"DSC-IV: 2DSC03BOT22: Diversity and Conservation of Plants"

"DSC BOT- PR-II: DSC03BOT19: DSC BOTANY LAB- 2"

Mo	nth: Januar	y	Module/Unit:	Sub-units planned
Lectures 05	Practicals 04	Total 09	Unit-3 : Pollination and Fertilization	Introduction and definition, Types of pollination (self, cross and its sub types) Agents of pollination
			Practical – II	
Moi	nth: Februa	ry	Module/Unit:	Sub-units planned
Lectures 04	Practicals 04	Total 08	Unit-3 : Pollination and Fertilization	Double fertilization: Definition and mechanism
			Unit-1: Study of classification systems	Introduction and definition, Ranks of classification.
			Practical – II	
M	onth: Marc	h	Module/Unit:	Sub-units planned
04	03	07	Unit-1: Study of classification systems	Study of five kingdom classification system (R. H. Whittaker). Study of general characters of each kingdom.
			Practical – II	-

Name and Signature of Teacher

CDr. Spehal S. Wadkar

ESTD JUNE 1964

Name and Signature of HOD
DEPARTMENT OF BOTANY
VIVEKANAND COLVEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Dr. Snehal Sanjay Wadkar

Programme: B. Sc. II

Semester: IV

Subject: Botany

Course Title: DSC -VII: DSC03BOT41: Resource Botany

Mo	nth: Januai	ry	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit-3: Floricultural Industry	Introduction to floriculture
03		03		Cultivation practices, Harvesting and marketing of Rose
Moi	nth: Februa	ry	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit-3: Floricultural Industry	Cultivation practices,
04		04		Harvesting and marketing of Rose
				Cultivation practices,
				Harvesting and marketing of Gerbera
Mo	onth: March	1	Module/Unit:	Sub-units planned
		O attack	<del></del>	

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

Name and Signature of HOD

DEPARTMENT OF BOYANY WEKANAND COLLEGE, KOLHAPUR TO SHERED WILLCHOWOTES



Academic Year: 2024-2025

Name of the teacher: Dr. Snehal Sanjay Wadkar

Programme: B. Sc. II

Semester: IV

Subject: Botany (VSC)

Course Title: Herbal Technology

Sub-units planned	Module/Unit:	Month: January		
<del></del>		Total	Practicals	Lectures
		03	03	
Sub-units planned	Module/Unit:	ry	ıth: Februa	Mor
		Total	Practicals	Lectures
		04	04	**
Sub-units planned	Module/Unit:	1	onth: Marcl	M
	WW:	04	04	-
Sub-units planned	Module/Unit:	1	Month: Apri	
-	•••	04	04	

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

196 Autor

Name and Signature of HOD DEPARTMENT OF BOTANY VIVEKANAND COLLEGE, KOLHAPUP (EMPOWERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Dr. Snehal Sanjay Wadkar

Programme: B. Sc. II

Semester: IV

Subject: Botany

Course Title: MIN- PR-IV: MIN03BOT49: Based on Paper MIN03BOT41 and

MIN03BOT42

Month: January			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
	04	04		
Moi	nth: Februa	ry	Module/Unit:	Sub-units planned
i <u>ai</u> a	03	03		
Month: March			Module/Unit:	Sub-units planned
**	04	04		

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

VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

## Vivekanand College, Kolhapur (Empowered Autonomous Institute) Department of Botany

**Annual Teaching Plan** 

Academic Year: 2024-2025

Name of the teacher: Dr. Snehal Sanjay Wadkar

Programme: B. Sc. III

Semester: VI

Subject: Botany

Course Title: DSE 7 F1 Section II: "Biostatistics, Economic Botany and Ethnobotany"

Mon	th: Novemb	er	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Section II:	
03	03	06	Unit II: Economic Botany II	3a:Beverages-Tea and Coffee
			Practical III	
Mon	th: Decemb	er	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Section II:	3b:Fiber Yielding Plants- Cotton and <i>Hibiscus</i>
04	04	08	Unit II: Economic Botany II	canabinis 3c:Oil yielding Pongamia pinnata
			Practical III	
Mo	nth: Januar	y	Module/Unit:	Sub-units planned
03	05	03	Section II:	3c:Oil yielding Sunflower
			Unit II: Economic Botany II	3d:Dye : <i>Lawsonia</i> and <i>Indigofera</i>
			Practical III	
Mor	Month: February Module/Unit:			Sub-units planned
01	04	04	Practical III	722

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

VIVEKANAND COLLEGE, KOLHAPUT (EMPOWERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Ms. Pradnya Baban Shelar

Programme: B. Sc. I

Semester: I

Subject: Botany

Course Title: "Basic in Botany" (DSC03BOT11)

Мо	nth: Augus	t	Module/Unit:	Sub-units planned		
Lectures	Practical	Total	Unit-I:	•	Role of plants in human	
02		02	Importance of Plant		welfare (Direct and	
					indirect), Role of plants in ecological services	
Mo	nth: Augus	t	Module/Unit:		Sub-units planned	
Lectures	Practical	Total				
0.4	02	0.6	Unit-I:	•	Evolutionary history of plants	
04	02	06	Importance of Plant	•	Study of Algae: Nostoc	
Mont	th: Septemb	er	Module/Unit:	Sub-units planned		
04	04	08	Unit:II Study of following examples with reference to occurrence, plant body and life cycle	•	Study of Fungi: <i>Mucor</i> Study of Bryophyte: Moss	
Moi	nth: Octobe	r	Module/Unit:		Sub-units planned	
04	04	08	Unit:II Study of following examples with reference	•	Study of Pteridophyte:  Pteris	
			to occurrence, plant body and life cycle	•	Study of Gymnosperms: Cycas	

Name and Signature of Teacher
(Ms. Pradrys B. Shelar)

Name and Signature of HoD

Academic Year: 2024-2025

Name of the teacher: Ms. Pradnya Baban Shelar

Programme: B. Sc. II (Open Elective)

Semester: III

Subject: Botany

Course Title: OEC03LFA11: Life Science-I Herbal Cosmetics-I

Month: August			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
	02	02	Practical I	
Mon	th: Septem	ber		
Lectures	Practicals	Total		
#	04	04	Practical I	. <del>de</del>
Mo	nth: Octob	er		
	04	04	Practical I	

Name and Signature of Teacher

(Ms. Pradrya B. Shelar)

Name and Signature of HoD

Academic Year: 2024-2025

Name of the teacher: Ms. Pradnya Baban Shelar

Programme: B. Sc. III

Semester: V

Subject: Botany

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

Pathology and Biofertilizers" (DSE7E1)

M	Ionth: July		Module/Unit:	Sub-units planned
Lectures 04	Practical	Total 04	Section: I Unit:I Cell as a unit of Life	<ul> <li>The cell theory,         Prokaryotic and             Eukaryotic cells, Cell             size and shape.     </li> <li>Cell membrane and cell</li> </ul>
Mo	nth: Augus	t	Module/Unit:	wall Sub-units planned
04 <b>Mon</b>	04 th: Septeml	08 <b>Der</b>	Section: I Unit:I Cell as a unit of Life  Module/Unit:	<ul> <li>Models of menbrane structure.</li> <li>The functions of membranes</li> <li>Cell cycle</li> <li>Sub-units planned</li> </ul>
05	04	09	Section: I Unit:I Cell as a unit of Life	<ul><li>Apoptosis</li></ul>
	75.		Section:II Unit: I Microbiology, Plant Pathology and Biofertilizers	Methods of microbiology
Month: October			Module/Unit:	Sub-units planned
05	04	09	Section:II Unit: I Microbiology, Plant Pathology and Biofertilizers	<ul> <li>Micro-organisms in biological world</li> <li>Scope of microbesin Industry and Environment</li> </ul>

Name and Signature of Teacher

(Ms. Pradnya B. Shelar)

ESTD JUNE 1964

Name and Signature of HoD

#### **Department of Botany**

Academic Year: 2024-2025

**Annual Teaching Plan** 

Name of the teacher: Dr. Priyanka Pravin Jadhav

Programme - B. Sc. III

Semester- VI

Subject: Botany

Course Title- "Horticulture, Forestry and Herbal Technology Forestry"

"Biostatistics, Economic Botany and Ethno botany"

¥	——————————————————————————————————————						
Mon	th - Decemb	er	Module/Unit:	Sub-units planned			
Lectures	Practicals	Total	Section: II (DSE 1007F2):	3a:Introduction, Forest types of			
			Forestry	India 3b:Wild life and Biosphere			
02	02	04		reserves 3c:Social and Agricultural			
02	02			Forestry			
Moi	nth – Januar	y	Module/Unit:	Sub-units planned			
Lectures	Practicals	Total		3d:Forest research education and			
	1140110415	10111		Training institutions 3e:Forest Acts			
				3f: Different Plant as a forest			
04	04	08		products.			
	0,	00					
Mor	nth- Februar	y	Module/Unit:	Sub-units planned			
			Section: II (DSE 1007F1):	4a: Introduction, Concept and Scope			
(4)			Ethnobotany	4b: Ethnobotanical studies with			
				reference to data collection- Field			
03	03	06		work, Herbarium, Ancient literature,			
				Archaeological findings, Sacred			
				groves.			
Mo	onth- March		Module/Unit:	Sub-units planned			
				4c: Role of ethnobotany in modern			
04	03	07		medicine- Adathoda vasica,			
04	03	07		Tinospora cordifolia,Curcuma longa			
				and Tribulus terrestris			

Name and Signature of Teacher
Dr. P. P. Jadhav

ESTD JUNE 1964

Name and Signature of HOD

DEPARTMENT OF BOTANY

VIVEKANAND COLLEGE, KOLHAPUR

(EMPOWERED AUTONOMOUS)

#### **Department of Botany**

Academic Year: Year: 2024-2025

**Annual Teaching Plan** 

Name of the teacher: Dr. Priyanka Pravin Jadhav

Programme: B. Sc. II

Semester- IV

Subject: Botany (Major)

Course Title: DSC -VII: DSC03BOT41 "Resource Botany"

DSC -VIII: DSC03BOT42 "Industrial Botany"

	DSC VIII. DSC03DO142 Industrial Botally						
I	Month – <b>Dece</b>	mber	Module/Unit:	Sub-units planned			
Lectures	Practicals	Total	DSC –VII: SC03BOT41:	Introduction and Scope, Major			
02		02	Resource Botany Unit-1: Forest as Potential Resource	forest produce			
Mo	nth – <b>Januar</b>	y	Module/Unit:	Sub-units planned			
Lectures	Practicals	Total	DSC-VIII: DSC03BOT42	their uses- Gum, Resin, Tannin and			
			"Industrial Botany"	Pigments.			
			Unit-1: Physical	Methods of seasoning and			
04		04	characteristics of Indian	chemical treatment of specialized			
			Woods	a			
Moı	nth- Februar	y	Module/Unit:	Sub-units planned			
04		04		Industial manufacturing of packing material and plywood, the Classification of plywoods according to their use.			
	Month- March		Module/Unit:				
04		04		Some important commercial woods - Dalbergia sp., Shorea robusta Tectona grandis, Cedrus deodara, Bamboo - the "Green Gold of India."			

Name and Signature of Teacher

Or. P. P. Tadkou



Name and Signerate of HOD
DEPARTMENT OF BOTANY
VIVEKANAND COXLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

# **Department of Botany**

Academic Year: Year: 2024-2025

**Annual Teaching Plan** 

Name of the teacher: Dr. Priyanka Pravin Jadhav

Programme: B. Sc. II

Semester- IV

Subject: Botany (Minor)

Course Title: MIN-PR-IV:MIN03BOT49;Based on paper MIN03BOT41 AND MIN03BOT42

Sub-units placed	Module/Unit:	ember	Month – December		
Sub-units planned		Total	Practicals	Lectures	
		02	02		
	Module/Unit:	гу	nth – <b>Janua</b>	Mon	
		Total	Practicals	Lectures	
		04	04		
	Module/Unit:	<b>y</b>	th- February	Mont	
		04	04	×	
	Module/Unit:	eh	Month- March		
		03	03		

Name and Signature of Teacher
Dr. P. P. Tadhal



Name and Signate of HOD
DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

#### **Department of Botany**

Academic Year: 2024-2025

**Annual Teaching Plan** 

Name of the teacher: Dr. Priyanka Pravin Jadhav

Programme: B. Sc. I

Semester- II

Subject: Botany

Course Title: "DSC BOT-PR-II: DSC03BOT19;DSCBOT LAB-2"

N	Ionth – <b>Decemb</b>	er	Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
	04	04		
Mon	th – <b>January</b>		Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
	03	03		
Mon	th- February		Module/Unit:	Sub-units planned
	04	04		
	Month- March		Module/Unit:	
	03	03		

Name and Signature of Teacher

Or. P. P. Jahav

Name and Signature of HOD DEPARTMENT OF BOTAN VIVEKANAND COLLEGE, KOLHAPUR

(EMPOWERED AUTONOMOUS)

Department of Botany

Annual Teaching Plan

Academic Year: 2024-2025

Name of the teacher: Mrs. Priya Ashish Talekar

Programme: B. Sc I

Semester: II

Subject: Botany

Course Title: PRACTICAL (Based on paper III and IV)

M. Alex December			NAT A ROAD TO SEC.	Sub-units planned
Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
: <del></del> 1	04	04		
Month:	January		Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
: <b></b> -	04	04		E E
Month:	February		Module/Unit:	Sub-units planned
	03	03	222	
Month:	March		Module/Unit:	Sub-units planned
	04	04		

Name and Signature of Teacher

(Mrs. Priya Ashish Talekar)

ESTD JUNE 1964

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Department of Botany

Annual Teaching Plan

Academic Year: 2024-2025

Name of the teacher: Mrs. Priya Ashish Talekar

Programme: B. Sc II Major

Semester: IV

Subject: Botany

Course Title: VSC PRACTICAL Herbal

**Technology** 

Month:	December		Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
	04	04		
Month:	January		Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
	04	04		
Month:	Month : February		Module/Unit:	Sub-units planned
	03	03		
Month:	Month: March		Module/Unit:	Sub-units planned
	04	04		

Name and Signature of Teacher

(Mrs. Priya Ashish Talekar)

ESTD JUNE 1964

Name and Signature of HoD

Department of Botany
Annual Teaching Plan

Academic Year: 2024-2025

Name of the teacher: Mrs. Priya Ashish Talekar

Programme: B. Sc II Minor

Semester: IV

Subject: Botany

Course Title: PRACTICAL

Month: 1	December		Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
	05	05		
Month:	January		Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
-	05	05		
Month:	February		Module/Unit:	Sub-units planned
	05	05		
Month:	Month: March		Module/Unit:	Sub-units planned
-	05	05	9 <b></b>	

Name and Signature of Teacher

(Mrs. Priya Ashish Talekar)

ESTD JUNE 1964

Name and Signature of HoD

### Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Botany

Annual Teaching Plan

Academic Year: 2024-2025

Name of the teacher: Mrs. Priya Ashish Talekar

Programme: B. Sc III

Semester: VI

Subject: Botany

Course Title: "Genetics and Plant Breeding & Biostatastics, Economic Botany and Ethnobotany"

Month : 1	December		Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper: DSE 7 F1 Section I:	1a. Introduction Terminologies
04	04		Unit 1: Heredity	
Month:	January		Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper: DSE 7 F1 Section I:	Laws of Inheritance (Monohybrid and
05	05		Unit 1: Heredity	Dihybrid )
N. 41.	February		Module/Unit:	Sub-units planned
05	05		Paper: DSE 7 F1 Section I: Unit 1: Heredity Paper: DSE 7 F2 Section II: Unit 1: Biostatastics	1b. Multiple Allelism  1d. Measures of central Tendancy – Mean, Mode, Median. 1e. Variances and standard deviation, Coefficient of variation.
Month	March		Module/Unit:	Sub-units planned
02	02		Section II: Unit 1: Biostatastics	1 f. Test of significance (Test), Chi-square tes (X2test)

Name and Signature of Teacher (Mrs. Priya Ashish Talekar)



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(EMPOSSERED ANTONOMOUS)

#### Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Botany
Annual Teaching Plan

Academic Year: 2024-2025

Name of the teacher: Mrs. Priya Ashish Talekar

Programme: B. Sc III

Semester: VI

Subject: Botany

Course Title: PRACTICAL (Based on paper III and IV)

Month:	December		Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
	05	05		
Month:	January		Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
	06	06	-	
Month:	February		Module/Unit:	Sub-units planned
	06	06		
Month:	March		Module/Unit:	Sub-units planned
	03	03		

Name and Signature of Teacher

(Mrs. Priya Ashish Talekar)

ESTD JUNE 1964

Name and Signature of HoD

DEEBREMERTE BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Ms.Bogare Aishwarya Anandarav

Programme: B. Sc. I

Semester: II

Subject: Botany

Course Title: DSC BOT- PR-II: DSC03BOT19: DSC BOTANY LAB- 2

Mon	th: Decemb	er	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	
	02	02	76 1 1 0T -:4.	Sub-units planned
Mo	nth: Januar	y	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	
-	05	05		Cub units planned
Moi	nth: Februa	ry	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	
	04	04		
Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	
44.0	02	02		

Name and Signature of Teacher

M8. A. A. Bogute.



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VIVEKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOS

Academic Year: 2024-2025

Name of the teacher: Ms.Bogare Aishwarya Anandarav

Programme: B. Sc. I

Semester: II

Subject: Botany

Course Title: "DSC 03BOT19" Practical – II ("DSC 03BOT19")

Mo	nth: Januar	y	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	Study of kingdom Protista with suitable
	02	02		example. Study the structure of Pollen grain.
Mo	nth: Februa	ry	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	Study of Dicot and Monocot Endosperm.
-	01	01		
Month: March			Module/Unit:	Sub-units planned
: <del></del>	01	01	Practical - II	Study of different types of Ovules.

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Name and Signature of Teacher

Ms. A. A. Bogare.

ESTD JUNE 1964

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DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

#### Vivekanand College, Kolhapur (Empowered Autonomous)

Department of Botany

Annual Teaching Plan

Academic Year: 2024-2025

Name of the teacher: Ms. Bogare Aishwarya Anandarav Programme: B. Sc III

Semester: VI

Subject: Botany

Course Title: PRACTICAL I

Month:	Month : December		Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
<del>#</del>	03	03		
Month:	January		Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
	04	04		
Month:	February		Module/Unit:	Sub-units planned
	05	05		
Month:	March		Module/Unit:	Sub-units planned
	03	03		

Name and Signature of Teacher

Ms. A. A. Bogare.

ESTD JUNE 1964

Name and Signature of HoD

DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR

Academic Year: 2024-2025

Name of the teacher Ms. Bogare Aishwarya Anandarav

Programme: B. Sc. III

Semester: VI

Subject: Botany

Course Title: DSE 7 F1 Section I: "Genetics and a Plant breeding"

Month: November			Module/Unit:	Sub-units planned	
Lectures	Practical	Total	Section I:	2a.Linkage concept and History. Types of Linkage	
03	:	03	Unit II: Linkage and Crossing Over		
Mon	th: Decemb	er	Module/Unit:	Sub-units planned	
Lectures	Practical	Total	Section II: Unit II:	2b.Crossing over- concept and significance. Cytological proof of	
04		04	Linkage and Crossing over	crossing over.	
Mo	nth: Janua	ry	Module/Unit:	Sub-units planned	
03		03	Section I: Unit II: Linkage and Crossing	2c.Linkage maps.	
			over Unit III: Extra –Chromosomal Genome	3a.Introduction and organization of genome.	
Month: February			Module/Unit:	Sub-units planned	
03	0.	03	Section J: Unit III: Extra –Chromosomal Genome	3b.Plastid inheritance. 3c.Mitochondrial inheritance	

Name and Signature of Teacher
Ms. A. Bogare



Name and Signature of HOD

DEPARTMENT OF BOTANY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Ms.Bogare Aishwarya Anandarav

Programme: B. Sc. II

Semester: IV

Subject: Botany

Course Title: MIN-VII MIN03BOT41 "Diversity of Flowering plant"

Mor	ith: Decem	ham	M- 1-1-07-14	
Worth. December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper I	
Dectares	Tacticals	Total	"Diversity of Flowering plant"	Introduction.
				Distinguishing characters
02	2 <b>44</b>	02	Unit I: Phanerogams	of Gymnosperm and
				Angiosperm.
Mo	nth: Januai	ry	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Paper I	Introduction
Lectures	Tacticals	Total	"Commercial Botany"	Potential fungi
0.5				Products
05		05	Unit II: Fungi	Processing and
				applications of fungi.
				1.Trichoderma 2.Metarhizium
Mon	th: Februa	rv	Module/Unit:	
		- 3	Wiodule, Citt.	Sub-units planned
			Paper I	3.Beauveria
04		04	"Commercial Botany"	4.Penicillium
				5.Aspergillus
			Unit II: Fungi	
Month: March			Module/Unit:	Sub-units planned
			Paper II	6.Yeast
05		05	"Commercial Botany"	7.Ganoderma
			Unit II: Fungi	8.Agaricus

Name and Signature of Teacher

Ms. A. A. Boyace.

ESTD JUNE 1964

Name and signature of HOD

DEPARTMENT OF BOTANY

MATERIAN COLLEGE, KOLHAPUP

Academic Year: 2024-2025

Name of the teacher: Ms.Bogare Aishwarya Anandarav

Programme: B. Sc. II

Semester: IV

Subject: Botany

Course Title: MIN03BOT41 and MIN03BOT42

Month: January			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
==	05	05		
Mo	Month: February		Module/Unit:	Sub-units planned
	07	07		
Month: March		h	Module/Unit:	Sub-units planned
1988	05	05		

Name and Signature of Teacher

Ms. A. A. Bogare

Name and Signature of HOD

DEPARTMENT OF BUTANY VALKANAND COLLEGE, KOLHAPUR (EMPOWERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Miss Shivani Khorate

Programme: B. Sc. I

Semester: II

Subject: Botany

Course Title: DSC BOT- PR-II: DSC03BOT19: DSC BOTANY LAB- 2

Mon	th: Decemb	er	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	
; <del></del> >	02	02		
Mo	nth: Januar	y	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	
	05	05	8	
Moi	nth: Februa	ry	Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	
1	04	04		
Month: March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	122R
	02	02		

Name and Signature of Teacher

Miss. Shivoni Vijay Khosate

ESTD JUNE 1964

Name and Signature of HOD
DEPARTMENT OF BOTT NY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPONERED AUTONOMOUS)

Academic Year: 2024-2025

Name of the teacher: Miss Shivani Vijay Khorate

Programme: B. Sc. I

Semester: II

Subject: Botany

Course Title: "Open Elective" Practical - II ("OECOLFS21: Herbal Cosmetics-II")

Mo	Month: January Module/Unit:		Sub-units planned	
Lectures	Practicals	Total	Practical - II	Preparation of mehandi Study of extraction and
	05	05		application of natural dyes Study of preparation of organic soaps.
Mor	Month: February		Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Practical - II	Study of preparation of dhoop and agarbati.
	04	04		Study of preparation of beverages.  Best from Waste Study of preparation of
Month: March		l	Module/Unit:	wheat grass juice Sub-units planned
-	03	03	Practical - II	DIY Study of preparation of Ayurvedic juices

Name and Signature of Teacher

Miss. Shivani Vijay khorate

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Academic Year: 2024-2025

Name of the teacher: Miss Shivani Vijay Khorate

Programme: B. Sc. II

Semester: IV

Subject: Botany

Course Title: MIN-PR-III "MIN03BOT49"

Month: December			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
	03	03	Practical IV	
Мо	nth: Januar	У	*	
Lectures	Practicals	Total		
	04	04	Practical IV	-
Mon	th: Februar	y		
	04	04	Practical IV	
Moi	nth: March			
	02	02	Practical IV	

Name and Signature of Teacher

Miss. Shivani Vijay Khosate

ESTD JUNE 1964

Name appearant of HOD
VIVEKANAND GOLLEGE, KOLNAPUP
(EMPOWERID AUTONOMOUS)

### Vivekanand College, Kolhapur (Empowered Autonomous) Department of Botany

**Annual Teaching Plan** 

Academic Year: 2024-2025

Name of the teacher: Miss Shivani Vijay Khorate

Programme: B. Sc. III

Semester: VI

Subject: Botany

Course Title: DSE 7 F2 Section II: "Molecular Biology and Biotechnology and

Horticulture, Forestry and Herbal Technology"

Mont	h: Novemb	er	Module/Unit:	Sub-units planned
Lectures 03	Practical 03	Total 06	Section I: Unit II: Recombinant DNA Technology	1a.Introduction 1b.Principle of Recombinant DNA Technology
Mon	th: Decemb	er	Module/Unit:	Sub-units planned
Lectures	Practical	Total	Section I:	1c. Enzymes involved in recombinant DNA
04	04	08	Unit II: Recombinant DNA Technology	technology.  1d. Introduction of cloning vectors  1e.Plasmid, Bacteriophage
Mo	nth: Janua	rv	Module/Unit:	Sub-units planned
05	04	09	Section I:	1f. Cosmid 1g. PCR
			Unit II: Recombinant DNA	4a Anther culture
			Technology Unit IV: Plant Tissue Culture	
Mo	onth: Febru	ary	Module/Unit:	Sub-units planned
04	04	08	Section I:	4b. Embryo culture 4c. Application of plantissue ulture.
			Unit IV: Plant Tissue Culture	

Name and Signature of Teacher
Miss. Shivani Vijay Khorate

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DEPARTMENT OF BOTANY VIVEKANAND COLLEGE, KOLHA (EMPOWERED AUTONOMOUS)