

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Nadia Chowhan

Class- B.Sc. II

Subject- Botany

Paper- I Biology and Diversity of Seed Plants-II

January, 2024 1st Week 1 Jan - 3 Jan	History of Taxonomy Introduction of Taxonomy and Systematics
7 Jan, 2024	Sunday
2nd Week 8 Jan - 10 Jan	Introduction of Biosystematics Fundamental components of taxonomy (Identification, Classification, Description, Nomenclature and Phylogeny)
14 Jan, 2024	Sunday
3rd Week 15 Jan and 16 Jan	Role of Chemotaxonomy and Cytotaxonomy Taximetrics in relation to Taxonomy
17 Jan, 2024 21 Jan, 2024	Shri Guru Gobind Singh Jayanti Sunday
4th Week 22 Jan - 24 Jan	Binomial Nomenclature; Principles and Rules Principle of priority, Type Concept, Taxonomic Ranks Keys to identification of plants (Herbaria, Botanical Gardens, Indexes, Floras, manuals, Monographs, Journals, Glossaries)
26 Jan. 2024 28 Jan, 2024	Republic Day Sunday
5th Week 29 Jan – 31 Jan	Flower and Types of Inflorescence (Racemose and Cymose) Special types of Inflorescence Technical terms of floral description

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Lesson Plan for the Even Semester, 2024 (January - April)

Name of the Teacher – Dr. Nadia Chowhan

Class- B.Sc. II

Subject- Botany

Paper- I Biology and Diversity of Seed Plants-II

February, 2024 1st Week 1 Feb – 3 Feb	Diversity of Flowering Plants: Diagnostic features and economic importance of the family: Malvaceae Diversity of Flowering Plants: Diagnostic features and economic importance of the family: Brassicaceae.
4 Feb, 2024	Sunday
2nd Week 5 Feb - 7 Feb	Diversity of Flowering Plants: Diagnostic features and economic importance of the family: Apiaceae Diversity of Flowering Plants: Diagnostic features and economic importance of the family: Ranunculaceae
11 Feb, 2024	Sunday
3rd Week 12 and 13 Feb	Salient features of the systems of classification of angiosperms proposed by Bentham & Hooker
14 Feb, 2024 18 Feb, 2024	Basant Panchmi Sunday
4th Week 19 Feb - 21 Feb	Salient features of the systems of classification of angiosperms proposed by Engler & Prantl Merits and demerits of both Bentham & Hooker and Engler & Prantl's classification system
25 Feb, 2024	Sunday
5th Week 26 Feb - 28 Feb	Diversity of Flowering Plants: Diagnostic features and economic importance of the family: Leguminosae (Pappilionatae) Diversity of Flowering Plants: Diagnostic features and economic importance of the family: Leguminosae (Caesalpinioideae)

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Lesson Plan for the Even Semester, 2024 (January - April)

Name of the Teacher – Dr. Nadia Chowhan
Class- B.Sc. II
Subject- Botany
Paper- I Biology and Diversity of Seed Plants-II

March, 2024 1 st Week 1 March –2 March	Diversity of Flowering Plants: Diagnostic features and economic importance of the family: Leguminosae (Mimosoideae) Class Test
3 March, 2024	Sunday
2nd Week 4 - 6 March	Diversity of Flowering Plants: Diagnostic features and economic importance of the family: Rutaceae Diversity of Flowering Plants: Diagnostic features and economic importance of the family: Solanaceae Practice of Floral Diagrams
8 March ,2024 10 March, 2024	Maha Shivratri Sunday
3rd Week 11 - 12 March	Diversity of Flowering Plants: Diagnostic features and economic importance of the family: Lamiaceae Diversity of Flowering Plants: Diagnostic features and economic importance of the family: Asteraceae
17 March, 2024	Sunday
4th Week 18– 20 March	Diversity of Flowering Plants: Diagnostic features and economic importance of the family: Poaceae Diversity of Flowering Plants: Diagnostic features and economic importance of the family: Liliaceae
23 March- 31 March	Holi Break

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Class- B.Sc. II

Subject- Botany

Paper- I Biology and Diversity of Seed Plants-II

April, 2024 1st Week 1 April- 3 April	Diversity of Flowering Plants: Diagnostic features and economic importance of the family: Euphorbiaceae Revision of technical terms
7 April ,2024	Sunday
2nd Week 8 April – 13 April	Sessional Exams
11 April, 2024 14 April, 2024	Id-UI-Fitr Sunday
3rd Week 15 and 16 April	Diversity of Flowering Plants: Diagnostic features and economic importance of the family: Asclepiadaceae Practice of Floral Diagrams
17 April, 2024 21 April, 2024	Ram Navmi Sunday
4th Week 22 - 24 April	Revision of Syllabus and Class Tests
5th Week 29 and 30 April	Revision of Syllabus and Class Tests
University Examinations: 1 May, 2024 Onwards	

KVA DAV College for Women, Karnal

Lesson Plan for the Even Semester, 2024 (January - April)

Name of the Teacher – Dr. Nadia Chowhan
Class- B.Sc. II
Subject- Botany
Paper-II Plant Embryology

January, 2024 1st Week 4 - 6 Jan	Flower-a modified shoot; functions of various floral parts Types of Inflorescence Flower Variations
7 Jan, 2024	Sunday
2nd Week 11 - 13 Jan	Microsporangium: development, structure and dehiscence mechanism Microsporogenesis Tapetum and its functions Pollen grains and its structure (pollen wall)
14 Jan, 2024	Sunday
3rd Week 18 – 20 Jan	Male Gametophyte: Development Microgametogenesis Structure of Megasporangium (ovule)
17 Jan,2024 21 Jan, 2024	Shri Guru Gobind Singh Jayanti Sunday
4th Week 25 - 27 Jan	Ovule Types Megasporogenesis and Megagametogenesis Embryo sac structure and types
26 Jan. 2024 28 Jan, 2024	Republic Day Sunday
5th Week 29 Jan – 31 Jan	Pollen-pistil interaction and Self incompatibility Pollination (types and agencies)

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Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Nadia Chowhan

Class- B.Sc. II

Subject- Botany

Paper-II Plant Embryology

February, 2024 1 st Week 1– 3 Feb	Pollination (types and agencies) Comparative account of different types of Pollination
4 Feb, 2024	Sunday
2 nd Week 8 - 10 Feb	Double fertilization Endosperm types and its biological importance
11 Feb, 2024	Sunday
3 rd Week 15-17 Feb	Embryogenesis in Dicot Embryogenesis in Monocot Polyembryony Class Test
14 Feb, 2024 18 Feb, 2024	Basant Panchmi Sunday
4 th Week 22 - 24 Feb	Development of Fruits and Significance General Structure of Fruit Classification of fruits
25 Feb, 2024	Sunday
5 th Week 29 Feb	Revision

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Lesson Plan for the Even Semester, 2024 (January - April)

Name of the Teacher – Dr. Nadia Chowhan

Class- B.Sc. II

Subject- Botany

Paper-II Plant Embryology

March, 2024 1 st Week 1 and 2 March	Types of fruits: Simple Dry (Dehiscent and Indehiscent)
3 March, 2024 2 nd Week 7 - 9 March	Sunday Types of fruits: Simple Dry (Schizocarpic) Types of fruits: Simple Fleshy
8 March, 2024 10 March, 2024 3 rd Week 14 - 16 March	Maha Shivratri Sunday Types of fruits: Aggregate Types of fruits: Multiple Revision of all types of Fruits and Class Test
17 March, 2024 4 th Week 21 and 22 March	Sunday Dispersal of fruits and seeds Seed: Development and Parts Structure of Dicot and Monocot Seed
23 March- 31 March	Holi Break

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Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Nadia Chowhan

Class- B.Sc. II

Subject- Botany

Paper-II Plant Embryology

April, 2024 1st Week 4 - 6 April	Seed Viability and Seed Dormancy Causes of seed dormancy and methods of breaking seed dormancy Seed Dormancy: Physiological Enigma, its importance
7 April, 2024	Sunday
2nd Week 8 April – 13 April	Sessional Exams
11 April, 2024 14 April, 2024	Id-UI-Fitr Sunday
3rd Week 18 - 20 April	Revision of Syllabus and Class Tests
17 April, 2024 21 April, 2024	Ram Navmi Sunday
4th Week 25 - 27 April	Revision of Syllabus and Class Tests
5th Week 29 April - 30 April	Revision of Syllabus and Class Tests
University Examinations: 1 May, 2024 Onwards	

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Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Seema Sharma

Class- B.Sc. III (Medical & Biotech)

Subject- Botany

Paper- I Biochemistry and Plant Biotechnology

January, 2024 1st Week 1 Jan - 3 Jan	Introduction of Biochemistry and Biotechnology Enzymes- Discovery and Nomenclature, Characteristics of enzymes; concept of holoenzyme, Apo-enzyme, coenzyme and co-factors
7 Jan, 2024	Sunday
2nd Week 8 Jan - 10 Jan	Regulation of enzyme activity and their mechanism of action Growth and development- Definitions and their different phases
14 Jan, 2024	Sunday
3rd Week 15 Jan and 16 Jan	Plant hormones- Auxin: history of their discovery & mechanism of action
17 Jan, 2024 21 Jan, 2024	Shri Guru Gobind Singh Jayanti Sunday
4th Week 22 Jan - 24 Jan	Plant hormones- Gibberellins, Cytokines, Abscisic acid & ethylene (history and their action)
26 Jan. 2024 28 Jan, 2024	Republic Day Sunday
5th Week 29 Jan – 31 Jan	Lipid metabolism- Structure and functions of lipids Biosynthesis of fatty acids, α - oxidation & β -oxidation of fatty acids

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Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Seema Sharma

Class- B.Sc. III (Medical & Biotech)

Subject- Botany

Paper- I Biochemistry and Plant Biotechnology

4 Feb, 2024	Sunday
2nd Week 5 Feb - 7 Feb	Saturated & Unsaturated Fatty acids Storage & mobilization of fatty acids
11 Feb, 2024	Sunday
3rd Week 12 and 13 Feb	Nitrogen Metabolism: Biology of nitrogen Fixation Importance of nitrate reductase & its regulation
14 Feb, 2024 18 Feb, 2024	Basant Panchmi Sunday
4th Week 19 Feb - 21 Feb	Biochemistry of nitrogen fixation Ammonium assimilation
25 Feb, 2024	Sunday
5th Week 26 Feb - 28 Feb	Genetic Engineering and Biotechnology- Tools & techniques of recombinant DNA technology Cloning vectors

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Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Seema Sharma

Class- B.Sc. III (Medical & Biotech)

Subject- Botany

Paper- I Biochemistry and Plant Biotechnology

3 March, 2024	Sunday
2nd Week 4 - 6 March	Genomic & cDNA library Transposable elements, Agro-bacterium, vectors for gene delivery and marker genes
8 March ,2024 10 March, 2024	Maha Shivratri Sunday
3rd Week 11 - 12 March	Aspects of Plant Tissue Culture Media preparation and sterilization technique In vitro- culture of protoplast, embryo and anther
17 March, 2024	Sunday
4th Week 18– 20 March	Somatic hybridization Cellular totipotency Differentiation & morphogenesis
23 March- 31 March	Holi Break

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Lesson Plan for the Even Semester, 2024

(January - April)

Name of the Teacher – Dr. Seema Sharma

Class- B.Sc. III (Medical & Biotech)

Subject- Botany

Paper- I Biochemistry and Plant Biotechnology

April, 2024 1st Week 1 April- 3 April	Photo morphogenesis- Phyto-chromes and their discovery, Physiological role and their mechanism of action
7 April ,2024	Sunday
2nd Week 8 April – 13 April	Sessional Exams
11 April, 2024 14 April, 2024	Id-UI-Fitr Sunday
3rd Week 15 and 16 April	Revision of Syllabus and Class Test
17 April, 2024 21 April, 2024	Ram Navmi Sunday
4th Week 22 - 24 April	Revision of Syllabus and Class Test
5th Week 29 and 30 April	Revision of Syllabus and Class Test
University Examination: 1 May, 2024 Onwards	

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Lesson Plan for the Even Semester, 2024 (January - April)

Name of the Teacher – Dr. Seema Sharma

Class- B.Sc. III (Medical & Biotech.)

Subject- Botany

Paper- II Economic Botany

January, 2024 1st Week 4 - 6 Jan	Introduction to Economic Botany and Importance Food Plants: Cereals- Rice Origin & Distribution, Botanical description, Cultivation and uses
7 Jan, 2024	Sunday
2nd Week 11 - 13 Jan	Cereal- Wheat Origin & Distribution, Botanical description, Cultivation and uses
14 Jan, 2024	Sunday
3rd Week 18 – 20 Jan	Cereal- Maize Origin & Distribution, Botanical description, Cultivation and uses
17 Jan, 2024 21 Jan, 2024	Shri Guru Gobind Singh Jayanti Sunday
4th Week 25 - 27 Jan	Pulses - Gram, Arhar, Pea
26 Jan. 2024 28 Jan, 2024	Republic Day Sunday

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Lesson Plan for the Even Semester, 2024 (January - April)

Name of the Teacher – Dr. Seema Sharma

Class- B.Sc. III (Medical & Biotech.)

Subject- Botany

Paper- II Economic Botany

February, 2024 1 st Week 1– 3 Feb	Vegetables -Tomato, Potato and Onion
4 Feb, 2024	Sunday
2 nd Week 8 - 10 Feb	Oils - Groundnut, Mustard and Coconut
11 Feb, 2024	Sunday
3 rd Week 15-17 Feb	Fibers - Cotton, Jute & Flax
14 Feb, 2024 18 Feb, 2024	Basant Panchmi Sunday
4 th Week 22 - 24 Feb	Morphology of Plant part used, brief idea of cultivation and uses Spices - Coriander, Ferula , Ginger , Turmeric & cloves
25 Feb, 2024	Sunday
5 th Week 29 Feb	Revision of Syllabus and Class Test

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Lesson Plan for the Even Semester, 2024 (January - April)

Name of the Teacher – Dr. Seema Sharma

Class- B.Sc. III (Medical & Biotech.)

Subject- Botany

Paper- II Economic Botany

March, 2024 1 st Week 1 and 2 March	Medicinal Plants- - Cinchona, Rauwolfia, Atropa
3 March, 2024	Sunday
2 nd Week 7 - 9 March	Medicinal Plants- - Opium, Cannabis, Neem
8 March, 2024 10 March, 2024	Maha Shivratri Sunday
3 rd Week 14 - 16 March	Botanical description & Processing and uses of : Beverages- Tea & Coffee
17 March, 2024	Sunday
4 th Week 21 and 22 March	Botanical description & Processing and uses of: Rubber and Sugarcane
23 March- 31 March	Holi Break

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Lesson Plan for the Even Semester, 2024 (January - April)

Name of the Teacher – Dr. Seema Sharma

Class- B.Sc. III (Medical & Biotech.)

Subject- Botany

Paper- II Economic Botany

April, 2024 1st Week 4 - 6 April	General account and sources of Timber Energy plantation and Bio-fuels
7 April, 2024	Sunday
2nd Week 8 April – 13 April	Sessional Exams
11 April, 2024 14 April, 2024	Id-UI-Fitr Sunday
3rd Week 18 - 20 April	Revision of Syllabus and Class Test
17 April, 2024 21 April, 2024	Ram Navmi Sunday
4th Week 25 - 27 April	Revision of Syllabus and Class Test
University Examination: 1 May, 2024 Onwards	

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Lesson Plan for the Even Semester, 2024

(February - May)

Name of the Teacher – Dr. Sonia Rathee

Class- B.Sc. I Life Sciences- Aided and SFS

Subject- Botany

Paper- Plant taxonomy and Ecology

14 Feb, 2024 18 Feb, 2024	Basant Panchmi Sunday
4th Week 19 Feb - 21 Feb	Introduction to taxonomy and Botanical nomenclature Rules and principles of ICBN Keys to identification of plants Introduction to herbaria Introduction to botanical gardens Floras, monographs, and journals
25 Feb, 2024	Sunday
5th Week 26 Feb - 28 Feb	Taxonomic evidences Types of inflorescence; Flower and parts of flower Artificial system, natural system and phylogenetic system of classification Angiosperm phylogeny group
3 March, 2024	Sunday
2nd Week 4 - 6 March	Bentham and Hooker system of classification Diagnostic features and economic importance of family Ranunculaceae Diagnostic features and economic importance of family Brassicaceae
8 March, 2024 10 March, 2024	Maha Shivratri Sunday
3rd Week 11 - 12 March	Diagnostic features and economic importance of family Malvaceae Diagnostic features and economic importance of family Euphorbiaceae Diagnostic features and economic importance of family Rutaceae
17 March, 2024	Sunday
4th Week 18- 20 March	Diagnostic features and economic importance of family Leguminosae Diagnostic features and economic importance of family Apocynaceae Diagnostic features and economic importance of family Lamiaceae Diagnostic features and economic importance of family Solanaceae Diagnostic features and economic importance of family Asteraceae
23 March- 31 March	Holi Break

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Lesson Plan for the Even Semester, 2024

(February - May)

Name of the Teacher – Dr. Sonia Rathee

Class- B.Sc. I Life Sciences- Aided and SFS

Subject- Botany

Paper- Plant taxonomy and Ecology

April, 2024 1st Week 1 April- 3 April	Diagnostic features and economic importance of family Poaceae Diagnostic features and economic importance of family Orchidaceae Ecology, definition, scope, importance, level of organization.
7 April, 2024	Sunday
2nd Week 8 April – 13 April	Sessional Exams
11 April, 2024 14 April, 2024	Id-Ul-Fitr Sunday
3rd Week 15 and 16 April	Environmental factors: climatic factors, edaphic factors, topographic factors and biotic factors Population ecology: Basic concepts, characteristics Biotic potential, Growth curves, ecotypes and ecads
17 April, 2024 21 April, 2024	Ram Navmi Sunday
4th Week 22 - 24 April	Community ecology: Basic concepts Methods of analysis Characteristics (qualitative and quantitative- analytical and synthetic) Ecological succession
5th Week 29 and 30 April	Ecological succession

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(February - May)

Name of the Teacher – Dr. Sonia Rathee

Class- B.Sc. I Life Sciences- Aided and SFS

Subject- Botany

Paper- Plant taxonomy and Ecology

May, 2024 1 st Week 1 May	Ecosystem: Trophic levels, food chain
5 May, 2024	Sunday
2 nd Week 6 – 8 May	Food web, Ecological pyramids, energy flow Phyto-geographical regions of India, Vegetation types of India Biodiversity levels, types significance, threats and conservation
12 May, 2024	Sunday
3 rd Week 13 - 15 May	Environmental pollution: Air and water pollution (Sources, types and control measures) Greenhouse effect and greenhouse gases Impacts of global warming, carbon trading