S. Y. B. Sc BOTANY

Practical based on (BOT- MN-241)

NEP 2020 Pattern, Semester I (2025-26)

Subject Teacher –Prof-Autade A.R

Course Objectives:

1. To provide students with practical knowledge through the study of plant organs such as roots, stems, leaves, flowers, and fruits, enabling them to identify and understand their types, modifications, and functions.

2. To train students to identify and classify various plant species based on their morphological features, including roots, stems, leaves, flowers, and fruits, using examples from common angiosperms.

3. To enhance observational skills through practicals involving the study of floral and fruit morphology, where students will analyze the structure of flowers and fruits in detail.

4. To enable students to explore the diversity of plant forms, modifications, and adaptations in different plant species, enriching their knowledge of plant morphology and ecology.

5. To give students real-world exposure to plant species in their natural habitats, encouraging fieldwork and learning about plant diversity and ecological interactions through an excursion. our daily life and also about the traditional medicines and herbs, and its relevance in modern times.

Course Outcomes:

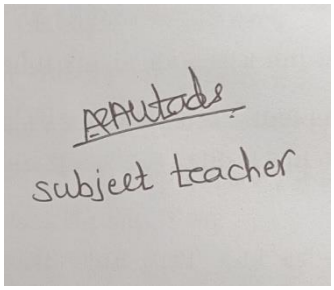
1. Upon completion, students will be able to identify and describe various types and modifications of plant organs (roots, stems, leaves, flowers, fruits) using real-life examples from their practical sessions.

2. Students will gain an understanding of the functional significance of morphological modifications, such as modified roots, stems, and leaves, and will be able to connect these adaptations with the plant's ecological role.

3. Students will be able to analyze and identify the structure and types of floral whoris (calyx, corolla, androecium, and gynoecium) and the types of fruits based on their morphological characteristics, enhancing their understanding of reproductive biology.

4. Students will acquire the skills to classify and document plant species based on their morphological features and will be able to distinguish between different types of plants based on their root, stem, leaf, flower, and fruit structures.

5. After the botanical excursion, students will be able to recognize and document angiosperms in their local environment, applying theoretical knowledge to real-world observations and enhancing their understanding of plant diversity and ecological relationships.



S. Y. B. Sc BOTANY

Horticulture (BOT- MN-241)

NEP 2020 Pattern, Semester I (2025-26)

Subject Teacher –Prof-Autade A.R

Topic:-

1.Introduction to Horticulture.

2. Morphology and importance of horticultural plant parts.

3. Propagation of horticultural plants.

4. Special horticultural Practices.

5. Commercial cultivation of horticultural crops.

6. Value addition to horticultural crops.

7. Landscape gardening.

8. Role of government agenciesin horticulture development.

Aims and objectives:

OBJECTIVES:

1. To introduce students to the basic concepts, scope, and branches of horticulture.

2. To impart knowledge about the morphological features and economic importance of different horticultural plant parts.

3. To provide an understanding of plant propagation methods and the use of propagation structures and growth regulators.

4. To familiarize students with specialized horticultural practices and their application in crop improvement.

5. To develop knowledge about commercial cultivation practices and value addition techniques in horticultural crops.

6. To create awareness about landscaping techniques and the role of national agencies in the development of horticulture in India.

COURSE OUTCOME –

After successful completion of the course, students will be able to:

O1: Explain the basic principles, branches, and scope of horticulture.

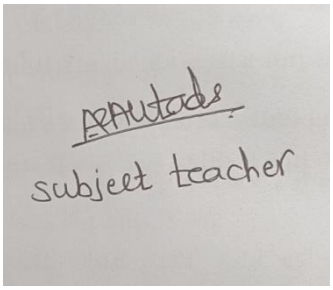
O2: Identify horticultural crops based on morphological parts and their economic significance.

O3: Demonstrate understanding of various propagation methods and the role of plant growth regulators and propagation structures.

O4: Apply special horticultural practices to enhance growth and productivity in selected crops.

05: Describe the commercial cultivation techniques and value addition processes of selected horticultural crops.

06: Design basic landscape gardens and explain the significance of governmental support in horticulture development.



S.Y.B.Sc. Botany [Semester - III]
Course Category – Minor Course (MN)
Course Code – BOT-244-MNP
Course Title: Practical based on BOT-241-MN

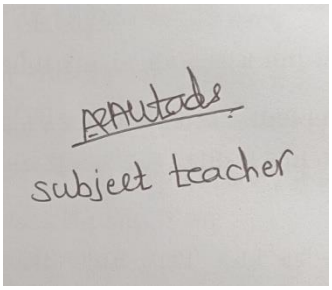
Prof-Autade A.R

OBJECTIVES:

1. To study the morphology and economic importance of selected plant parts used in horticulture.
2. To impart knowledge and practical skills in using common horticultural tools and techniques.
3. To demonstrate and practice special horticultural methods such as pruning, training, girdling, and bending.
4. To provide hands-on training in vegetative propagation techniques including cutting, layering, grafting, and budding.
5. To develop skills in value-added product preparation (e.g., rose water, wine, sauces) and ornamental plant arrangements like bonsai and terrariums.

Course Outcomes (COs):

After successful completion of the course, students will be able to:
CO1: Identify and describe the morphology of various plant parts of horticultural importance (root, stem, leaf, flower, fruit, seed).
CO2: Efficiently handle and utilize horticultural tools and perform key horticultural practices such as pruning, earthing up, and staking.
CO3: Apply vegetative propagation techniques (cutting, layering, grafting, budding) for plant multiplication in both ornamental and fruit plants.
CO4: Prepare and present value-added horticultural products and ornamental structures like gulkand, rose water, moss sticks, bonsai, and terrariums.
CO5: Demonstrate knowledge of horticultural industries through field visits and compile structured reports based on nursery, orchard, or floriculture market observatio



S.Y.B.Sc. Botany [Semester - III]
Course Category – Generic Elective (GE) / Open Elective (OE)
Course Code – OE-202-BOT-T
Course Title: Medicinal Botany

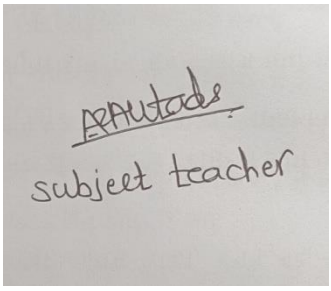
Prof-Autade A.R

OBJECTIVES:

1. To acquire scientific and traditional knowledge of medicinal plants.
2. To understand the fundamental philosophy of various traditional medicinal systems of India.
3. To develop skills in preparing household products from medicinal plants.
4. To learn techniques for the cultivation and conservation of medicinal plants.
5. To gain information about entrepreneurial opportunities and government schemes in the field of medicinal plants.

COURSE OUTCOMES (COs):

CO1: Students will acquire theoretical and scientific knowledge about the definition, historical background, classification of medicinal plants, and the chemical constituents involved in drug formulation.
CO2: Students will understand the philosophy, uses of medicinal plants, and comparative aspects of traditional Indian medicinal systems such as Ayurveda, Unani, Siddha, Naturopathy, and Homeopathy.
CO3: Students will learn the methods of preparing household Ayurvedic products (such as hair oil, Triphala powder, face pack, shampoo, etc.) and will be able to use them safely.
CO4: Students will gain knowledge about the organic cultivation of medicinal plants, biological protection, and conservation techniques (In-situ and Ex-situ), and will develop awareness about the conservation of local biodiversity.
CO5: Students will explore the commercial potential of medicinal plants, local and global markets, startup opportunities, and government schemes, thus paving the way toward entrepreneurship.



Principal
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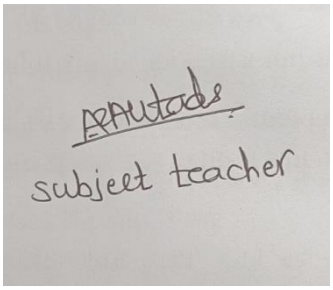
S.Y.B.Sc. Botany [Semester - IV]
Course Category –Minor Course (MN)
Course Code – BOT-293-MN
Course Title: Herbal Product Technology
Prof-Autade A.R

OBJECTIVES:

1 To introduce the concept, types, and importance of herbal products.
2 To familiarize students with methods of preparation and classification of herbal products.
3 To impart knowledge on extraction techniques and quality control of herbal formulations.
4 To understand the pharmacological uses of common medicinal plants.
5 To promote awareness about commercialization, marketing, and documentation of herbal knowledge.

Course Outcomes (COs):

After successful completion of the course, students will be able to:
CO1: Define and differentiate various types of herbal products and their applications.
CO2: Demonstrate preparation methods for herbal formulations like decoctions, tinctures, and powders.
CO3: Apply suitable extraction and standardization techniques for herbal products.
CO4: Describe the pharmacological importance of selected medicinal plants.
CO5: Collect, record, and report traditional herbal knowledge from local sources



S. Y. B. Sc. Botany [Semester - IV]
Course Category – Generic Elective (GE) / Open Elective (OE)
Course Code – OE-252-BOT-P
Course Title: Nursery Techniques

Prof-Autade A.R

Course Objectives:

To equip students with the knowledge and practical skills required to establish, manage and operate a successful nursery

Understand propagation techniques, nursery layout and design.

Understand plant health management, business planning and marketing strategies.

Course Outcomes:

Students will acquire the knowledge and practical skills required to establish, manage and operate a successful nursery.

They will understand propagation techniques, nursery layout and design.

They will understand plant health management, business planning and marketing strategies.