



DEPARTMENT OF BOTANY

Program:- B.Sc. Botany

Programme Outcome:

- PO1. Understanding of Plant Diversity and its importance in the maintenance of ecological balance.
- PO2. Students learn to carry out practical work, in the field and in the laboratory, interpreting plant morphology and anatomy, Plant identification, Vegetation analysis techniques.
- PO3. Apply the knowledge of basic science, life sciences and fundamental process of plants.
- PO4. Apply modern techniques and instruments for Biochemical estimation, Molecular Biology, Biotechnology, Plant Tissue culture experiments, cellular and physiological studies of plants with an understanding of the applications in human life.
- PO5. Apply the knowledge gained from the studies for the upliftment of society via addressing health, environmental issues, food scarcity etc.

Programme Specific Outcome:

- PSO1. Critical evaluation of ideas and arguments by collecting relevant information about the plants, so as to recognize their position in the classification systems and at phylogenetic level.
- PSO2. Students will be able to access the primary literature, identify relevant works for a particular topic, and evaluate the scientific content of these works.
- PSO3. Students will be able to compare and contrast the characteristics of the different groups of plants such as algae, fungi, bryophytes, pteridophytes, gymnosperms and angiosperms.
- PSO4. Students will be able to use the evidence of comparative biology to explain how the theory of evolution offers the only scientific explanation for the unity and diversity of life on earth.
- PSO5. Students will be able to explain how Plants function at gene, genome, cellular and tissue level,
- PSO6. Students will be will be able to relate the physical features of the environment to the structure of populations, communities, and ecosystems.
- PSO7. Students will be able to conceive the idea of artificial propagation of plants via vegetative methods and to find a livelihood via establishing miniature plant nurseries.

Course:- F.Y.B.Sc. Botany

Course outcome:

SEM: I PAPER: I
USBO101 Plant Diversity I

CO1: Understand Chlorophyta among algae along with the life-cycles, range of thallus and economic importance of algae.

CO2: Understand how to identify and classify Phycomycetes from Fungi based on general characters & life cycles.

CO3: Understand basic concepts of economic importance of fungi & their modes of nutrition & significance in nature.

CO4: Understand Hepaticae from Bryophytes along with life cycles.

SEM: I PAPER: II
USBO102 Form and Function I

CO1: Understand the basic components of cells, the structure, function & importance of cell components

CO2: Understand basic concepts of importance of producers & consumers, energy flow in ecosystem & productivity of an ecosystem

CO3: Understand Basics of genetics, genetic variations, Mendelian genetics and its modified ratios

CO4: Importance of plants in breeding experiments & their importance in agriculture

SEM: II PAPER: I
USBO201 Plant Diversity I

CO1: Understand stellar evolution among Pteridophytes along with the life-cycles of & economic importance of Pteridophytes.

CO2: Understand how to identify and classify fossil Pteridophytes from the remains that are available as study material.

CO3: Understand basic concepts of economic importance of Gymnosperms & the modes of nutrition & significance in nature.

CO4: Understand Angiosperm classification.

CO5: To understand the diversity of plants & their parts and be able to describe & identify them in the field along with their economic importance

SEM: II PAPER: II
USBO202 Form and Function I

CO1: Understand the basic anatomical features of plants and identify them based on these features.

CO2: To be able to understand the physiology of plants & its importance & implications to human life.

CO3: Importance of enzymes, their functions & mode of action in plants.

CO4: Understand basic concepts of importance of secondary metabolites produced by plants.

CO5: Importance of medicinal plants to humans & their usage in everyday life

Course:- S.Y.B.Sc. Botany

Course outcome:

SEM: III PAPER: I
USBO301 PLANT DIVERSITY-II

- CO1: Understand the life-cycles of Sargassum and Dictyota
- CO2: Understand Anthocerotae among Bryophyta along with life-cycle of Anthoceros
- CO3: Understand how to identify and classify plants based on Bentham & Hooker's classification.
- CO4: Understand basic concepts of preservation methods, microscopy, and chromatography and gel electrophoresis.

SEM: III PAPER: II
USBO302 Form and Function II

- CO1: Understand the life-cycles of Sargassum and Dictyota
- CO2: Understand Anthocerotae among Bryophyta along with life-cycle of Anthoceros
- CO3: Understand how to identify and classify plants based on Bentham & Hooker's classification.
- CO4: Understand basic concepts of preservation methods, microscopy, chromatography and gel electrophoresis.

SEM: III PAPER: III
USBO303 CURRENT TRENDS IN PLANT SCIENCES-I

- CO1: Understand monograph study from pharmacopoeia
- CO2: Understand study of detection of adulterants
- CO3: Understand plant product sources pertaining to fibers, spices, condiments and paper
- CO4: Understand the concept of aromatherapy, nutraceuticals, plant enzyme industry and biofuels
- CO5: Understand the technique of Vitamin C and Protein estimation

SEM: IV PAPER: I
USBO401 PLANT DIVERSITY-II


- CO1: Understand Ascomycetae among fungi along with the life-cycles of Erysiphe and Xylaria
- CO2: Understand how to identify and classify Lichens based on general characters.
- CO3: Understand basic concepts of plant pathology & their modes of nutrition & significance in nature.
- CO4: Understand the concept of Geological time-scale and fossil formation process
- CO5: Understand Coniferophyta among Gymnosperms along with life cycles and their economic importance


SEM: IV PAPER: II
USBO402 Form and Function II

- CO1: Understand the different types of plant tissues and their role in plant body
- CO2: Understand various physiological processes in plant body
- CO3: Understand the concept of long-day and short-day plants
- CO4: Understand the application of chromatography for separation of sugars and fermentation exercises
- CO5: Understand biogeochemical cycles and their importance and study of community ecology both on the basis of qualitative and quantitative characters.
- CO6: Learn soil organic matter analysis and quadrat study in field

SEM: IV PAPER: III
USBO403 CURRENT TRENDS IN PLANT SCIENCES-I

- CO1: Understand and plan the garden designs both formal and informal.
- CO2: Understand the technique of bottle garden and dish garden preparations.
- CO3: Understand various sterilization techniques, seed sterilization, callus induction
- CO4: Understand through the problems of biostatistics, the technique of extrapolating the knowledge to biological problems.
- CO5: Understand the application of bioinformatics tools.


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