DEPARTMENT OF BOTANY

M.Sc. Botany (Two-Year) Programme

19BOTC101 Plant Diversity – I (Algae and Bryophytes)

Course Outcomes:

CO1: Identify, classify and describe the morphological nature of various types of algae
CO2: Understand the occurrence, structure and life cycle of algae and bryophytes
CO3: Appreciate the phylogency and evolutionary relationship in non-flowering plants
CO4: Gain adequate knowledge on comparative account of various algae and bryophytes and economic importance of algae and bryophytes
CO5: Comprehend the economic importance of Algae and Bryophytes

19BOTC102: Fungi, Lichens and Plant Pathology

Course Outcomes:

CO1: Gain adequate knowledge on comparative account of various fungi, lichens and plant pathogens
CO2: Appreciate the salient features of Fungi and lichens
CO3: Appreciate the disease of various crop plants
CO4: Understand the host parasite interaction process
CO5: Appreciate the economic importance of fungi and lichens

19BOTC103: Microbiology and Immunology

Course Outcomes:

CO1: Analyze the classification and structure of microorganisms
CO2: Understand the various microbial culture techniques
CO3: Learn about the advantages of microorganisms to the society
CO4: Comprehend the techniques followed in immunology

19BOTP104:Practical – I (covering Plant Diversity – I, Fungi, Lichens, Plant Pathology, Microbiology and Immunology)

Course Outcomes:

CO1: Identify the given algae, Bryophytes, fungi and Lichens
CO2: Analyze the various microorganisms
CO3: Identify the type of Blood Group

19BOTC201: Plant Diversity – II (Pteridophytes, Gymnosperms and Palaeobotany)

Course Outcomes:

CO1: Gain adequate knowledge on comparative account of Pteridophytes
CO2: Comprehend the structure of Gymnosperms
CO3: Understand the palaeobotany to trace the evolution of plants
CO4: Appreciate the economic importance of Pteridology and Gymnosperms
CO5: Understand the types of fossil fuels and their conservation

19BOTC202: Anatomy, Embryology of Angiosperms and Morphogenesis

Course Outcomes:

CO1: Analyze the various tissues in plants, their structure and functions
CO2: Understand the secondary growth in dicot and monocot plants
CO3: Comprehend the embryo and endosperm development in plants
CO4: Appreciate the development of various organs in plants

19BOTC203:Cell Biology , Genetics and Plant Breeding
Course Outcomes:
CO1: Understand the structure of cell and cell organelles
CO2: Appreciate the cell division
CO3: Comprehend the Mendelian principles of Genetics
CO4: Understand the mutational changes in plants
CO5: Appreciate the Principles of Plant breeding

19BOTP204:Practical – II (covering Plant Diversity – II, Anatomy, Embryology of Angiosperms, Morphogenesis, Cell Biology, Genetics and Plant Breeding)
Course Outcomes:
CO1: Analyze the structure of cell division
CO2: Analyze the chromosome types
CO3: Understand the Mendalian inheritance
CO4: Comprehend the various Plant propagation methods

19BOTC301:Taxonomy of Angiosperms and Economic Botany
Course Outcomes:
CO1: Understand the classification and nomenclature of plants
CO2: Appreciate the application of computers in plant taxonomy
CO3: Comprehend the characteristic features of various families of angiosperms
CO4: Understand the economic importance of Angiospermic plants

19BOTC302: Biochemistry and Molecular Biology
Course Outcomes:
CO1: Understand the structural features of carbohydrates, proteins and lipids
CO2: Appreciate the properties of enzymes
CO3: Understand the structure of DNA
CO4: Appreciate the protein synthesis

19BOTC303: Biological Techniques and Research Methodology
Course Outcomes:
CO1: Understand the basic working principles of various microscopes
CO2: Analyze the working principles of Calorimeter, Spectrophotometer, Electrophorosis.
CO3: Understand the art of scientific writing
CO4: Appreciate various patents
CO5: Comprehend the computer applications in scientific research

19BOTC304: Plant Biotechnology and Genetic Engineering
Course Outcomes:
CO1: Understand the methods of gene transfer
CO2: Appreciate the recombinant DNA technology
CO3: Understand the applications of Biotechnology in Transgenic crop plants

19BOTP305: Practical – III (covering Taxonomy of Angiosperms, Economic Botany, Biochemistry , Molecular Biology, Biological Techniques, Research Methodology, Plant Bio-technology and Genetic Engineering)
Course Outcomes:
CO1: Identify the given plant family
CO2: Analyze the given instrument
CO3: Analyze the experiments related to Biotechnology and Genetic engineering

19BOTC401: Plant Physiology

Course Outcomes:

CO1: Understand the process of photosynthesis, respiration and nitrogen metabolism
CO2: Comprehend plant growth hormones
CO3: Understand the responses of plants to biotic and abiotic stresses
CO4: Comprehend the relationship between water and plants

19BOTC402: Environmental Biology and Evolution

Course Outcomes:

CO1: Understand the ecosystem structure and functions
CO2: Comprehend the vegetation types of India
CO3: Appreciate the biodiversity conservation through *In-situ* and *Ex-situ*
CO4: Analyze the origin and evolution of life
CO5: Understand the study of vegetation

19BOTP403:Practical – IV (covering Plant Physiology, Environmental Biology and Evolution)

Course Outcomes:

CO1: Understand the physiological process of plants
CO2: Analyze the various experiments related to environmental biology
CO3: Analyze the various evidences of evolution

19BOTE205.1: Herbarium Keeping

Course Outcomes:

CO1: Understand the herbarium and its types
CO2: Appreciate the process of Herbarium specimen preparation
CO3: Comprehend the physical and scientific curing of herbarium specimen
CO4: Gain adequate knowledge on E-herbarium
CO5: Understand the process involved in starting a new herbarium

19BOTE205.2: Forest Technology

Course Outcomes:

CO1: Understand the forest types of India
CO2: Appreciate the value of wild life conservation
CO3: Gain adequate knowledge on silviculture
CO4: Comprehend the physical, chemical and mechanical properties of wood
CO5: Understand the methods of studying the form

19BOTE306.1: Applied Botany

Course Outcomes:

CO1: Understand the forest types of India
CO2: Appreciate the value of wild life conservation
CO3: Gain adequate knowledge on silviculture
CO4: Comprehend the physical, chemical and mechanical properties of wood
CO5: Understand the methods of studying the form

19BOTE306.2: Bioprospecting of Medicinal and Aromatic Plants

Course Outcomes:

CO1: Understand the history of herbal medicine
CO2: Appreciate the quality control of medicinal plant preparation

CO3: Comprehend the bioactive compounds found in plants
CO4: Understand the plant defense mechanism
CO5: Gain adequate knowledge on post-harvest technology in medicinal plants