

Department of Botany

Program Outcome: BSc in Botany

Program Specific Outcome

PSO 1 The program enables the students to learn about the plant kingdom, its diversity and life cycle patterns.

PSO 2 The program helps learners to develop concepts of Plant morphology and tissue systems, palaeobotany, Palynology, Embryology, Plant Physiology and biochemistry, Cytology, Systematic botany, Ecology and Environment.

PSO 3 The course enables students to generate ideas on microbial world and its culture.

PSO 4 The course imparts a fair idea on the economic aspects of botany and also of microbial world, which enables students to build capacity on its application.

PSO 5 The course offers hands on practical knowledge on all the branches of botanical science, bioinformatics, and sophisticated instrumentations viz. microscopy, spectrophotometry, microtechniques and also on tissue culture techniques.

PSO 6 The course creates opportunities for field oriented activities to observe various groups of plants in natural habitat and to generate ideas on the practical utility of the subject.

Course Outcomes: BSc Botany Major

Paper- M101 (Plant Kingdom, Algae, Fungi)

CO1- Basic concepts on thallophytes i.e. Algae and Fungi ; special features: classification, life cycle and phylogeny.

Paper- M102 (Bryophytes and Pteridophytes)

CO2 -Basic concepts on Bryophytes and vascular cryptogams; special features: classification, life cycle and phylogeny.

Paper- M201 (Gymnosperms, Paleobotany and Plant Anatomy)

CO3- Introduction to Gymnosperms, paleobotany and Plant Anatomy: Comparative study, Paleobotanical evidences, chemical organization of cell and different types of tissues and tissue systems

Paper- M202 (Cell Biology)

CO4- Introduction to cell Biology: Molecular concepts and dynamism; regulation of cell cycle.

Paper- M301 (Ecology, Plant geography and Evolution)

CO5- Ecological concepts, impact of environmental pollution, phytogeographical regions of India with special reference to N.E. India, Theories and mechanisms of evolution.

Paper- M302 (Instrumentation and Laboratory techniques)

CO6 – Hands on techniques and knowledge: Microscopy, Image documentation, various types of instruments, chromatography, spectroscopy; Fixatives and stains; herbarium and preservation.

Paper- M401 (Morphology, Palynology, Embryology of Angiosperms)

CO7- Role of morphology in plants with special reference to palynology and basic concepts on embryology.

Paper- M402 (Plant Taxonomy)

CO8- Objectives, Principles and Evolutionary Trends in taxonomy: Classification, Affinities and Phylogeny.

Paper- M501 (Microbiology and Immunology)

CO9-Introduction to Microbial world and concepts of immunology.

Paper- M502(Plant pathology and Lichen)

CO10-Concepts of plant diseases, its control and management; Introduction to Lichen World.

Paper- M503 (Cytogenetics, Plant Breeding and Biometrics)

CO11-Principles of inheritance, Cytological basis and recombination mechanisms, evolutionary significance; Hybridization techniques and its genetic basis. Basic concepts on Biometry.

Paper- M504 (Applied Botany)

CO12-Economic importance and applied aspects of various groups of plants; knowledge on deforestation and its impact on climate change.

Paper- M601 (Molecular Biology and plant Biochemistry)

CO13-Molecular and organizational aspects of gene and gene sequences, mutation; Concepts on enzymes, protein synthesis, nitrogen and carbohydrate metabolisms.

Paper- M602 (Bioinformatics, computer Application and Biochemistry)

CO14-Introduction and application of bioinformatics; basics of computers and internet browsing; history, scope and significance of biotechnology.

Paper- M603 (Plant physiology)

CO15-Knowledge on various physiological processes of plants viz. photosynthesis, respiration, transpiration, plant-soil-water relationship, mineral nutrition, translocation and growth regulation.

Paper- M604 (Plant Resource Utilization)

CO16- Concept of centre of origin of cultivated plants; applied aspects of economically important plants; Pharmacognosy and its importance in medicinal plant uses; importance of traditional knowledge and Intellectual Property Rights.