

Course outcomes of P.G. Botany

Semester-I			
1	PSBOTC101	Principles of Microbiology	CO1: Familiarizing the students with the diversity exhibited by microbes. CO2: Apprising students of structural, reproductive and economic aspects of bacteria and viruses.
2	PSBOTC102	Diversity and Evolution of Algae and Bryophytes	CO1: Acquainting the students with the morphological and evolutionary details of diverse algal species. CO2: Making students comprehend biology, diversity and economic aspects of Bryophytes, the amphibians of plant kingdom.
3	PSBOTC103	Cytology, Genetics and Cytogenetics	CO1: Equipping the student with knowledge of structure of genetic material and principles of heredity. CO2: Developing skills for utilising information gained on cytological and genetic features for designing breeding experiments.
4	PSBOTC104	Plant Anatomy	CO1: Engaging the students to understand internal basic architecture and cellular composition of plant body. CO2: Acquainting students with development, anatomy and functions performed by specific organs of monocot and dicot taxa.
5	PSBOPC105	Based on PSBOTC101 & PSBOTC102	CO1: Deals with all microbes and the technologies for their effective uses in industry. CO2: Utilising microbes for mitigation of environmental problems.
6	PSBOPC106	Based on PSBOTC103 & PSBOTC104	CO1: Developing analytical skills by studying chromosomal details, working out genetic based problems and using data for explaining different principles. CO2: Making students understand anatomical aspects of different plant parts, their patterns of development and analysis of wood qualitatively.
Semester 2			
1	PSBOTC201	Cell and Molecular Biology of Plants	CO1: Imparting students knowledge regarding the structural and functional aspects of cell and organelles at micro- and macro-molecular level. CO2: Analysing fine structure of gene and gene expression in pro- and eukaryotes, importance of macromolecules in all the fundamental activities of a cell and ultimately life.
2	PSBOTC202	Diversity and Evolution of Pteridophytes and Gymnosperms	CO1: Unfolding the diversity, structural and biological details of Pteridophytes and Gymnosperms. CO2: Highlighting the advances made in their

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			phylogeny.
3	PSBOTC203	Taxonomy and Systematics of Angiosperms	CO1: Deals with naming and classification of plants along with their evolutionary relationships which form backbone of biodiversity studies. CO2: Learning about the specific habitat conditions and distribution of different taxa which is critical for their perpetual existence.
4	PSBOTC204	Embryology and Reproduction in Flowering Plants	CO1: Imparting the students knowledge on plant reproduction, development and population structure. CO2: Highlighting classical and experimental approaches for understanding sporogenesis, gametogenesis, fertilization, embryogenesis and seed development.
5	PSBOTC205	Based on PSBOTC201 & PSBOTC204	CO1: Giving students an insight into ultra structure of DNA, RNA and proteins and different sub-cellular organelles. CO2: Developing in students ability to determine breeding systems and reproductive modes in different plant groups by experimentation.
6	PSBOTC206	Based on PSBOTC202 & PSBOTC203	CO1: Making students understand biology of diverse species of Pteridophytes and Gymnosperms and identify them using specific morphological traits. CO2: Inculcating ability to study different species of angiosperms in field and laboratory, followed by their naming and classification.
SEMESTER III			
1	PSBOTC301	Plant Physiology and Metabolism	CO1: Making students understand role of enzymes, molecular signals and hormones and cross-talk between these for regulating various activities. CO2: Understanding mechanisms leading to water and mineral absorption, solute transport, photosynthesis, respiration, nitrogen and sulphur metabolism.
2	PSBOTC302	Plant Breeding and Biostatistics	CO1: Imparting students knowledge regarding breeding techniques for higher and quality yield. CO2: Engaging the students for designing biological experiments, analyzing and interpreting the data generated.
3	PSBOTC303	Plant Resource Utilization and Conservation	CO1: Enhancing the knowledge of students about the important plant resources and their sustainable utilization. CO2: Providing information about the origin and domestication of important plant taxa.
4	PSBOTC304	Plant Propagation	CO1: Acquainting students with vegetative and in vitro practices used for growing and maintaining

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			important taxa. CO2: Preparing students for establishing their plant resource based business units.
	PSBOTC305	Ecology and Environmental Biology	CO1: Making students understand abiotic and biotic components of ecosystems and their interactions, extent of biodiversity prevalent and its management using various conservation approaches. CO2: Assessing various ecological issues affecting environment and finding ways to mitigate these.
6	PSBOTC306	Based on PSBOTC301 & PSBOTC305	CO1: Developing in students understanding about plant-water-mineral relations, photosynthetic and respiratory pathways and mechanisms developed by plants to overcome stress. CO2: Acquainting students with biotic responses to different environmental factors, types of pollution and significance of indicator species.
7	PSBOTC307	Based on PSBOTC302 & PSBOTC303	CO1: Developing in students capability of collecting, analysing and interpreting data using statistical tools. CO2: Providing students insight about plant diversity analysis and its conservation, cultivation practices of important pulses, spices, condiments and dye-yielding plants.
SEMESTER IV			
1	PSBODC401	Dissertation/Project Work	CO1: Exposing the students to handling of research problems, making them capable of proposing a hypothesis, planning, designing and executing the experiments to finally managing and interpreting the data, and drawing inferences. Each student compiles a dissertation on a topic mutually agreed between him/her and a faculty member, who acts as a mentor.
2	PSBOTC402	Mycology And Plant Pathology	CO1: Equipping students with the knowledge of various plant diseases caused by different pathogens, means of their entry in plants and defence system of plants. CO2: Making students know pre- and post harvest losses and methods adopted for their management.
3	PSBOTC403	Genetic Engineering and Plant Tissue Culture	CO1: Making students knowledgeable about the methods involved in modifying and manipulating genes within and between species, creating new medicines, producing disease resistant plants and diagnosing human diseases.

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			CO2: Developing skills of in-vitro culturing of plants for mass multiplication and production of haploid and virus-free plants.
4	PSBOTC404	Based on PSBOTC402 & PSBOTC403	CO1: Learning about the pathogenic aspects of various groups of fungi, their disease cycles and control measures. CO2: Gaining knowledge about sterile techniques employed for isolation of microbes in pure culture and their identification.

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