

**List of Courses having focus on local, national, regional and global developmental needs
offered by the PG and Research Department of Botany**

PG and Research Department of Botany						
Programme: M.Sc., Botany					Year: 2023 -2025	
Course Code	Course Title	Need				Rationale
		Local	National	Regional	Global	
23PBY101	Plant Diversity I	✓	✓	-	-	Utilizing the algae and fungi as food, medicine, fertilizer and algae as indicators of pollution.
23PBY102	Plant Diversity II	✓	✓	-	-	Identifying the ecology and evolutionary significances of Bryophytes, Pteridophytes and Gymnosperms in environmental sustainability.
23PBY103	Applied Microbiology and Plant Pathology	✓	✓	✓	-	Knowledge about microbes. Knowledge about plant infectious microbes and their diagnostic methods
23PBY1E1	Ecology and Phytogeography	-	-	-	✓	To understand the mechanism of environmental and biodiversity management
23PBY1E2	Ethno Botany	✓	-	-	✓	To study the local herbs and their medicinal properties to treat diseases
	Seed technology	✓	✓	-	-	Awareness on storage reserves in seeds, seed longevity and seed

						viability to quality yield of crops.
23PBY207	Cytology, Genetics and Plant Breeding	-	-	-	✓	To study genes and their mode of expression Awareness on the conventional methods of plant breeding to producing new variety.
23PBY2E4	Elective2 Horticulture and Landscaping	✓	-	-	-	To understand the principle and techniques of improving horticultural plants
23PBY2E5	IPR and Bioethics	-	✓	-	-	Fundamentals of patenting, copyright and trademark
23PBY2E6	Organic farming	✓	-	-	-	The preparation and application of organic manures locally
23PBY2N1	Non- Major Elective 1 Industrial Botany	✓	✓	-	-	Fiber yielding plants, Antibiotics from algae and fungi

HOD

Dr. R. Rakkimuthu, M.Sc., Ph.D.,
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Principal

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22PBY309	Taxonomy of Angiosperms	✓	✓	-	-	To learn the method of identifying plants to arrive at local and national flora
22PBY310	Plant Biochemistry and Biophysics	-	-	-	✓	Knowledge in the synthesis of biomolecules and their role in metabolic pathways along with their regulation.
22PBY311	Plant Biotechnology and Nanobiology	-	-	-	✓	Demonstrates the role of transgenic plants and bionano particles in the fields of medicine, agriculture and environment. To inculcate the techniques of plant tissue culture, so that students can get placed in plant tissue culture industries
22PBY312	Laboratory course - III	✓	✓	✓	-	Accurate identification of plants for stake holders
22PBY313	Laboratory course - IV	✓	✓	✓		Knowledge on the

						preparation of solutions, to carry out the experiments on biochemistry and plant tissue culture.
22PBY3E7	Forestry and wood science	✓	✓	✓	-	Manufacturing the value added products from non timber forest products
22PBY3E8	Herbal Technology	-	-	✓	-	To learn the medicinal value of plants and the students will study the medicinally used traditional herbs
22PBY3E9	Pharmacognosy	-	✓	-	-	To study the medicinal plants and their utilization in the preparation of herbal pharmacueticals
22PBY413	Research Methodology	-	-	-	✓	Scientific understanding of analytical techniques and detail interpretation of results.
22PBY414	Bioinformatics and Cyber Security	-	-	-	✓	Modern competences in the handling of bioinformatics tools.

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