

**1.1.1 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: 2018-2019
Course Code	Course Title	Need				Rationale
		Local	National	Regional	Global	
18PBY101	<b>Core - 1</b> Microbiology	✓	✓	✓	-	Knowledge about microbes. Knowledge about plant infectious microbes and their diagnostic methods
18PBY102	<b>Core - 2</b> Phycology, Mycology, Lichenology and Bryology	✓	✓	-	-	Utilizing the algae and fungi as food, medicine, fertilizer and algae as indicators of pollution.
18PBY103	<b>Core - 3</b> Pteridophytes, Gymnosperms and Palaeobotany	✓	✓	-	-	Identifying the ecology and evolutionary significances of Bryophytes, Pteridophytes and Gymnosperms in environmental sustainability.
18PBY1E1	Ecology and Phytogeography	-	-	-	✓	To understand the mechanism of environmental and biodiversity management
18PBY205	<b>Core - 5</b> Anatomy and Embryology	✓	✓			
18PBY206	<b>Core - 6</b> Plant physiology	✓	✓	✓		
18PBY207	<b>Core - 7</b> Cytogenetics and	-	-	-	✓	To study genes and their



	Plant Breeding					mode of expression Awareness on the conventional methods of plant breeding to producing new variety.
18PBY2E4	<b>Elective2</b> Horticulture	✓	-	-	-	To understand the principle and techniques of improving horticultural plants
18PBY2N1	<b>Non- Major Elective</b> Mushroom cultivation	-	✓	-	-	Mushroom cultivation
18PBY309	Plant Systematics	✓	✓	-	-	To learn the method of identifying plants to arrive at local and national flora
18PBY310	Plant Biochemistry and Biophysics	-	-	-	✓	Knowledge in the synthesis of biomolecules and their role in metabolic pathways along with their regulation.
18PBY311	Research Methodology	-	-	-	✓	Scientific understanding of analytical techniques and detail interpretation of results.
18PBY3E5	Forestry and wood science	✓	✓	✓	-	Manufacturing the value added products from non timber forest products
18PBY312	<b>Laboratory course - III</b>	✓	✓	✓	-	Accurate identification of plants for stake holders
18PBY313	<b>Laboratory course - IV</b>	✓	✓	✓		Knowledge on the



						preparation of solutions, to carry out the experiments on biochemistry and plant tissue culture.
18PBY414	Molecular Biology and Plant Biotechnology	-	-	-	✓	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
18PBY415	Bioinformatics and Cyber Security	-	-	-	✓	Modern competences in the handling of bioinformatics tools.

HOD

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