

PG and Research Department of Botany
NALLAMUTHU GOUNDER MAHALINGAM COLLEGE
POLLACHI - 642001

**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: 2019-2020	
Course Code	Course Title	Need				Rationale
		Local	National	Regional	Global	
19PBY309	Core - 9 Plant Systematics	✓	✓	✓	-	To learn the method of identifying plants to arrive at local and national flora
19PBY310	Core -10 Plant Biochemistry and Biophysics	-	-	-	✓	Knowledge in the synthesis of biomolecules and their role in metabolic pathways along with their regulation.
19PBY311	Core -11 Research Methodology	-	✓	-	✓	Scientific understanding of analytical techniques and detail interpretation of results.
19PBY3E5/	Elective - 5 Forestry	-	-	✓	-	To conserve the forest using various management practices
19PBY3E6	Elective -6 Herbal Technology	-	✓	-	✓	To learn the methods to analyse the herbs and manufacture of drugs
19PBY312	Core - 12 Core Practical - III (for core paper 9)	-	-	✓	-	To learn identification of plant diversity to understand medicinal

						importance of plants and the students will study the traditional herbs
19PBY313	Core - 13 Core Practical –IV (for core papers 10 and 11)	✓	✓	✓	✓	To understand and isolate the medicinal components which is used in drug industry
19PBY414	Core - 14 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
19PBY415	Core - 15 Bioinformatics and Cyber Security	-	-	-	✓	Modern competences in the handling of bioinformatics tools in the field molecular industries.
19PBY416	Core - 16 Core Practical -V (for core papers 14 and 15)	✓	✓	✓	-	Knowledge on the preparation of culture Media, to carry out the experiments on Plant tissue culture



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		Local	National	Regional	Global	
20PBY101	Plant Diversity I	✓	✓	-	-	Utilizing the algae and fungi as food, medicine, fertilizer and algae as indicators of pollution.
20PBY102	Plant Diversity II	✓	✓	-	-	Identifying the ecology and evolutionary significances of Bryophytes, Pteridophytes and Gymnosperms in environmental sustainability.
20PBY103	Applied Microbiology and Plant Pathology	✓	✓	✓	-	Knowledge about microbes. Knowledge about plant infectious microbes and their diagnostic methods
20PBY104	Laboratory course - I	-	✓	-	✓	Products from Algae and pteridophytes. Antimicrobial Sensitive test for Drug

20PBY1E1	Ecology and Phytogeography	-	-	-	✓	To understand the mechanism of environmental and biodiversity management
20PBY1E2	Economic Botany	✓	-	-	-	To study the local herbs and their medicinal properties to treat diseases
20PBY205	Plant Anatomy and Reproductive Biology	✓	-	-	-	To study about production of seedless fruits
20PBY206	Plant Physiology	-	✓	-	-	To study about stress physiology
20PBY207	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.
20PBY2E3	Elective2 Horticulture and Landscaping	✓	-	-	-	To understand the principle and techniques of improving horticultural plants
20PBY2E4	IPR and Bioethics	-	✓	-	-	Fundamentals of patenting, copyright and trademark
20PBY2N1	Non- Major Elective 1 Entrepreneurship Botany	✓	✓	✓	✓	It deals with various making of value added products using plants
20PBY309	Taxonomy of Angiosperms	✓	✓	-	-	To learn the method of identifying plants to arrive at local and national flora
20PBY310	Plant Biochemistry and Biophysics	-	-	-	✓	Knowledge in the synthesis of biomolecules

						and their role in metabolic pathways along with their regulation.
20PBY311	Research Methodology	-	-	-	✓	Scientific understanding of analytical techniques and detail interpretation of results.
20PBY3E5	Forestry and wood science	-	-	✓	-	To conservation of forest
20PBY3E6	Herbal Technology	-	-	✓	-	To learn the medicinal value of plants and the students will study the medicinally used traditional herbs
20PBY312	Laboratory course - III	✓	✓	✓	✓	Identification of medicinal plants for drug preparation
20PBY313	Laboratory course - IV	✓	✓	✓		Knowledge on the preparation of solutions, to carry out the experiments on biochemistry
20PBY414	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
20PBY415	Bioinformatics and Cyber Security	-	-	-	✓	Modern competences in the handling of

						bioinformatics tools.
20PBY415	Laboratory course - V	✓	✓	✓		Knowledge on the preparation of MS Medium, to carry out the experiments on Plant tissue culture



Bos Chairman

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