



**SHRIMATHI DEVKUNVAR NANALAL BHATT
VAISHNAV COLLEGE FOR WOMEN (AUTONOMOUS)**
OWNED AND MANAGED BY CORK INDUSTRIES CHARITIES TRUST
(Affiliated to the University of Madras and Accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.

**PG DEPARTMENT OF PLANT BIOLOGY AND
PLANT BIOTECHNOLOGY**

M. Sc. PLANT BIOLOGY AND PLANT BIOTECHNOLOGY

CHOICE BASED CREDIT SYSTEM (CBCS)

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**LEARNING OUTCOMES BASED CURRICULUM FRAMEWORK
(LOCF)**

2025-2027 Batch



PROGRAMME OUTCOMES (PO)

After completion of the programme, the student will be able to

PO1	To Identify and analyze the complex problems reaching substantiated conclusions using domain knowledge.
PO2	To apply investigative research, specialize in problem identification, formulate research design, utilise analytical tools, draw valid inferences and provide suggestions leading to nation building initiatives.
PO3	To strengthen professional ethics and career planning with systematic building of intrapersonal and interpersonal skills to participate in the intellectual diasporas.
PO4	To establish oneself as a self-reliant, empowered individual for an inclusive, healthy and compassionate understanding towards life and society.
PO5	To equip with technical / managerial expertise to innovate and critically analyses various attributes which constitute pivotal issues in a multidisciplinary scenario.
PO6	To emerge as innovators and pioneers to create new avenues of employment catering to the global trends as well as demands.

PROGRAMME SPECIFIC OUTCOMES (PSO)

The students at the time of graduation will

PSO1	To gain an advanced knowledge on concepts in classical and modern plant biology and Plant biotechnology
PSO2	To analyze the acquired knowledge experimentally using various technological aspects to customize plant products for the benefit of humankind
PSO3	To demonstrate the ability to think critically and creatively using knowledge gained from experiments in order to pursue jobs in plant biology and plant biotechnology



**M. Sc. PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
CURRICULUM FRAMEWORK 2025 – 2027 Batch**

SEM	PART	COURSE TYPE	COURSE CODE	COURSE TITLE	CREDITS	HOURS	CIA	ESE	TOTAL
I	I	Core Theory I	24PPBCT1001	Algae, Fungi, Lichens and Bryophytes	4	90	40	60	100
		Core Theory II	24PPBCT1002	Pteridophytes, Gymnosperms and Paleobotany	4	90	40	60	100
		Elective Theory I Classroom/ Coursera	24PPBET1A01/ 24PPBET1B01	Pharmacognosy / Herbal Medicine	3	75	40	60	100
		Elective Theory II Classroom/ Coursera	24PPBET1A02/ 24PPBET1B02	Applications of Algae / Sea weeds and Algal Biotechnology	3	75	40	60	100
	Core Practical I	24PPBCP1001	Algae, Fungi, Lichens, Bryophytes, Pteridophytes, Gymnosperms and Paleobotany	4	90	40	60	100	
	II	Skill based elective	25PSECS1001	Cyber Security Essentials	3	70	100	-	100
II	I	Core Theory III	20PPBCT2003	Plant Anatomy, Embryology, Palynology	4	90	40	60	100
		Core Theory IV	25PPBCT2004	Taxonomy of Angiosperms and Economic Botany	4	90	40	60	100
		Core Theory IV	24PPBCT2005	Microbiology and Plant Pathology	4	90	40	60	100
		Elective Theory III Classroom/ Coursera	24PPBET2A03/ 24PPBET2B03	Recombinant DNA Technology/ Molecular Genetics	3	75	40	60	100



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		Core Practical II	25PPBCP2002	Plant Anatomy, Embryology, Palynology, Taxonomy of Angiosperms, Economic Botany, Microbiology and Plant Pathology	4	90	40	60	100
	II	Soft Skills	18MOOC2002	SWAYAM (MOOC)	4	90	100	-	100
III	I	Core Theory VI	24PPBCT3006	Cell and Molecular Biology	4	90	40	60	100
		Core Theory VII	25PPBCT3007	Ecology, Conservation Biology and Phytogeography	4	90	40	60	100
		Core Theory VIII	24PPBCT3008	Plant Tissue Culture and Biotechnology	4	90	40	60	100
		Elective Theory IV Classroom/ Coursera	24PPBET3A04/ 24PPBET3B04	Bioinstrumentation and Research methodology AI for Scientific Research Specialization	3	75	40	60	100
		Core Practical III	24PPBCP3003	Cell and Molecular Biology, Ecology, Conservation Biology, Phytogeography, Plant Tissue Culture and Biotechnology	4	90	40	60	100
	II	Skill based elective	18PSSRS3003	Research Skills	3	75	100	-	100
		Internship	17PPBIP3001	Internship	2	90	40	60	100
IV	Core Theory IX	24PPBCT4009	Genetics and Plant Breeding	4	90	40	60	100	
	Core	24PPBCT4010	Plant Physiology and	4	90	40	60	100	



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IV	I	Theory X		Biochemistry					
		Elective Theory V Classroom/ Coursera	24PPBET3A04/ 24PPBET3B04	Bioinformatics Bioinformatics	3	75	40	60	100
		Core Practical IV	24PPBCP4004	Genetics and Plant Breeding, Plant Physiology and Biochemistry	4	90	40	60	100
		Project	20PPBPR4001	PROJECT	4	90	40	60	100
	II	Skill Enhancement	23PSECR4004	Skill Enhancement - Coursera	4		100		100
				TOTAL	91				2500