

Syllabus: Botany including Environmental Studies in AECC (Ability Enhancement Compulsory Course)

B.Sc. General Botany-as per the curriculum designed by Vidyasagar University, Midnapore, W.B.

Year	Semester	Course type/ Credits/Marks	Course title	Teacher -1 (Assistant Prof.) Dr. Pampi Ghosh	Teacher -II (SACT) Sanjoy Sinha
1 <sup>st</sup> Year	I	Core-1 DSC 1A / 06 credits / (75 (CA-15, ESE-60)	Biodiversity (Microbes, algae, fungi and archegoniate) PRACTICAL	Archigoniate, Bryophytes, pteridophytes and gymnosperms, mycorrhizae, fossil. Whole Practical	Microbes, algae, fungi and lichen.
	II	Core-IV DSC 1B/ 06 credits/ 75 (CA-15, ESE-60)	Plant Ecology and Taxonomy PRACTICAL	Introduction, eco- factors, plant communities, ecosystem, phyto- geography, introduction to plant taxonomy, identification. Whole practical excluding a small taxonomy part.	Taxonomic evidences, hierarchy, botanical nomenclature, Classification, biometrics, numerical taxonomic and cladistics. Taxonomy practical (Some aspects)
		AECC-2, EVS/ 04 credits/100 (CA-20, Project-30, ESE-50)	Environmental studies	Biodiversity  Project work	Ecosystem  Project work
2 <sup>nd</sup> Year	III	Core-7 DSC 1C/06 credits/75 (CA-15, ESE- 60)	Plant Anatomy & Embryology PRACTICAL	Tissue systems, organs, secondary growth, adaptive and protective systems, Flowers- Structural organizations. Whole practical	Pollination, fertilization, embryo and endosperm, apomyxis and polyembryony.
		SEC-I /02 credits/50 (CA-10, ESE- 40)	Biofertilizers or, Nursery and Gardening	Definition, algal, fungal, bacterial biofertilizers, production, mass	-

				culture, organic farming, vermicomposting.	
	IV	Core-10 DSC 1D /06 credits/75 (CA-15, ESE-60)	Plant Physiology and Metabolism PRACTICAL	Plant water relation, mineral nutrition, translocation through phloem, photosynthesis, respiration. Whole practical	Enzymes, N2 metabolism, plant growth regulators, plant response to light and temperature.
		SEC-2 /02 credits/ 50 (CA-10, ESE-40)	Herbal Technology or Mushroom culture Technology	Definition, media, preparation of bed, nutritional value of mushroom, storage and food preparation.	Cultivation technology of mushrooms,
3 <sup>rd</sup> Year	V	DSE-1A/ 06 credits/75 (CA-15, ESE-60)	Cell & Molecular Biology PRACTICAL Or, Economic Botany & Biotechnology PRACTICAL Or, Bioinformatics PRACTICAL	Cell Molecular biology by P Ghosh during lockdown period.  Economic botany: Origin and development of cultivated plants, cereals, legumes, spices, beverages, oil and fats, fibre yielding plants, Whole practical. (During lock down Pampi Ghosh took full responsibility to compete the class)	--  Economic Botany: Introduction to biotechnology, plant tissue culture, recombinant DNA technology.
		SEC-3/ 02 credits/50 (CA-10, ESE-40)	Floriculture or, Ethnobotany	Ethnobotany: Introduction, methodology, role of ethnobotany and modern medicine, ethno botany and legal aspects (During lock down)	-
	VI	DSE-1B/ 06 credits/	Genetics and Plant Breeding	During Lock down period full	

		75 (CA-15, ESE-60)	PRACTICAL Or, Analytical Techniques in Plant Sciences PRACTICAL Or, Research Methodology PRACTICAL	syllabus of Genetics and Plant Breeding was done by Dr. P Ghosh.  Analytical Techniques in Plant Sciences - N.A-  Research Methodology: Basic Concept of research, data collection, documentation of observations, methods to study plant cell and tissue structure, plant micro- technique, the art of scientific writing and its presentation. --Full practical part--	Nil  N.A.  General Lab. Practice, overview of biological problems.
		SEC-4/ 02 credits/50 (CA-10, ESE- 40)	Medicinal Botany PRACTICAL Or, Plant Diversity and Human Welfare PRACTICAL Or, Intellectual Property Rights PRACTICAL	Medicinal Botany: History, scope and importance of medicinal plants, conservation of endangered and endemic medicinal plants, ethnobotany and folk medicines.	Nil
GE (General Elective)					
1 <sup>st</sup> Year	Semester- I	GE-1 06 credits / (75 (CA-15, ESE-60)	Biodiversity (Microbes, algae, fungi and archegoniate) PRACTICAL	Archigoniate, Bryophytes, pteridophytes and gymnosperms, mycorrhizae, fossil. Whole Practical	Microbes, algae, fungi and lichen.
1 <sup>st</sup> Year	Semester- II	GE-2/ 06 credits/	Plant Ecology and Taxonomy	Introduction, eco- factors, plant	Taxonomic evidences,

		75 (CA-15, ESE-60)	PRACTICAL	communities, ecosystem, phyto-geography, introduction to plant taxonomy, identification. Whole practical excluding a small taxonomy part.	hierarchy, botanical nomenclature, Classification, biometrics, numerical taxonomic and cladistics. Taxonomy practical (Some aspects)
		GE-3/06 credits / (75 (CA-15, ESE-60)	Economic Botany & Biotechnology PRACTICAL	Economic botany: Origin and development of cultivated plants, cereals, legumes, spices, beverages, oil and fats, fibre yielding plants, Whole practical. (During lock down Pampi Ghosh took full responsibility to compete the class)	Economic Botany: Introduction to biotechnology, plant tissue culture, recombinant DNA technology.
		GE-4/06 credits / (75 (CA-15, ESE-60)	Plant Anatomy & Embryology PRACTICAL Or, Plant Physiology and Metabolism PRACTICAL	Tissue systems, organs, secondary growth, adaptive and protective systems, Flowers-Structural organizations. Whole practical	Pollination, fertilization, embryo and endosperm, apomyxis and polyembryony.

Note: CA-Continuous assessment, ESE-End Semester Examination, CC-Core Course, SEC-Sill enhancement Course, DSE-Discipline Specific Elective,

This course is introduced by Vidyasagar University w.e.f. 2018-2019 (Vide syllabus from website of the V.U.)