KATWA COLLEGE

COURSE OUTCOME OF B.SC BOTANY (HONS)

SEMESTER -I

Course	Paper	Learning outcome
CC – I	Microbiology and phycology	1. The students learn about economic importance of viruses with reference to vaccine production ,role in medicine and as causal organisms of plant diseases.. 2. The students acquire knowledge about physiochemical and biological characteristics ;classification ,structure of TMV of virus.lytic and lysogenic cycle. 3. The students learn about General characteristics of bacteria.Types –Archea.Eubacteria;Bacterial chromosome and extra chromosomal genetic elements;Endospore. 4. The students assimilate adequate knowledge in understanding role and application of algae in biotechnology; industry; Agriculture and Environment; classification of Algae. 5. The students learn about cell structure and reproductive structure of Cyanophyta, Xanthophyta, Chlorophyta, Charophyta, Phaeophyta and Rhodophyta.
CC –II	Archegoniate	1. The students became familiarize themselves with unifying features of archegoniate; Transition and adaption to land habit. 2. The students also became familiarize themselves with characteristics and classification of Bryophyte; Morphology and reproduction of Riccia, Marchantia,Pellia,Anthoceros,Sphagnam and Funaria. 3. The students learn about morphology and reproduction of Lycopodium ,Selaginella,Equisetum,Pteris. 4. The students acquire knowledge about GymnospermsCycas .Pinus and Gnetum.

SEMESTER -II

Course	Paper	Learning outcome
CC – III	Mycology and phytopathology	6. The students learn about the General characteristics; Affinities with plants and animals; Thallus organization; Cell wall composition; Nutrition; and Classification of Fungi. 7. The students acquire knowledge about the reproduction and life cycle of different classes of fungi. 8. The students learn about Occurrence; General characteristics; Range of thallus organization; reproduction of lichen further VAM and their significance. 9. The students assimilate adequate knowledge in understanding role and application of fungi in biotechnology;food industry; Agriculture (Biofertilizers); and Biological control. 10. The students acquire skill in understanding about plant pathology.
CC –IV	Morphology & Anatomy of Angiosperms	5. The students became familiarize themselves with angiosperms like its taxonomy, morphology, embryology. 6. The students also became familiarize themselves with the anatomy of angiosperms.

SEMESTER -III

Course	Paper	Learning outcome
CC 5:	Plant Ecology and Phytogeography	1. The students being taught aboutPlant Ecology and Phytogeography.
CC 6:	Plant Systematics	1. The students absorb conceptual knowledge in understanding about Plant Systematics.
CC : 7	Economic Botany	1. The students acquire basic concept about Economic Botany.
SEC-1	1. Ethnobotant or	❖ The students acquire skill about Ethnobotany and their role in modern medicine.

	2. Intellectual Property Rights or 3. Medicinal Botany or 4. Mushroom Culture Technology or 5. Agricultural Botany	❖ The students acquire skill about Intellectual Property Rights . ❖ The students are able to develop skill in Medicinal Botany. ❖ The students acquire skill in understanding Mushroom Culture Technology. ❖ The students accommodate with basic concept about Agricultural Botany.

SEMESTER -IV

Course	Paper	Learning outcome
CC 8:	Palaeobotany & Palynology	2. The students being taught aboutPalaeobotany and Palynology.
CC 9:	Biomolecules and Cell Biology	2. The students absorb conceptual knowledge in understanding about Biomolecules and Cell Biology.
CC : 10	Molecular Biology	2. The students acquire basic concept about Molecular Biology.
SEC-2	6. Biofertilizers or 7. Herbal Technology or 8. Nursery & Gardening or 9. Floriculture or 10. Plant Diversity andHuman Welfare	❖ The students acquire skill about different types of Biofertilizers and their applications. ❖ The students acquire skill about Herbal Technology. ❖ The students are able to develop skill in Nursery and Gardening. ❖ The students acquire skill in understanding Floriculture techniques and its applications. ❖ The students accommodate with basic concept about plant diversity and different types of Human Welfare

SEMESTER V

Course	Paper	Learning outcome
CC 11	Plant Physiology	❖ The students acquire basic concept of plant water relationship;Mineral nutrition;Nutrient uptake;Translocation in phloem;Physiology of flowering of plants.
CC 12	Plant Metabolism	❖ The students became familiarize with concept of metabolism of Cabohydrate,Lipid,Nitrogen and Carbon.
DSE 1	1. Techniques in Plant Sciences or 2. Reproductive Biology of Angiosperms or 3. Silviculture and Forest Management	❖ The students acquire knowledge about Techniques in Plant Sciences. * ❖ The students become acquainted of Reproductive Biology of Angiosperms. ❖ The students being taught about Silviculture and Forest Management.
DSE 2	1. Biostatistics or 2.Bioinformatics Or 3.Natural Resource Management	❖ The students acquire knowledge about Biostatistics. The students became proficient in understanding about Bioinformatics. The students acquire knowledge about Natural Resource Management.

SEMESTER VI

Course	Paper	Learning outcome
CC 13	Genetics and Plant Breeding	❖ The students acquire basic concept ofMendelian genetics and its extension,extrachromosomal inheritance, linkage crossing over, chromosome mapping,mutation, Evolutionary genetics,plant breeding and crop improvement.
CC 14	Plant Biotechnology	❖ The students became familiarize with concept of about tissue culture, recombinant DNA technology,cloning and application of biotechnology.
DSE 3	4. Phytoremediation and immunology or 5. Plant evolution and	❖ The students acquire knowledge about Phytoremediation and immunology. * ❖ The students become acquainted of Plant

	Biodiversity or 6. Marine biology and Phycotechnology	evolution and Biodiversity. ❖ The students being taught about Marine biology and phycotechnology.
DSE 4	2. Horticultural Practices and Post Harvesting Technology or 3. Industrial and environmental Microbiology	❖ The students acquire knowledge about Horticultural practices and Post Harvesting Technology. ❖ The students became proficient in understanding about Industrial and environmental Microbiology.

COURSE OUTCOME OF B.SC BOTANY (GENERAL)

SEMESTER -I

Course	Paper	Learning outcome
CC -1A	Biodiversity(Microbes,Algae,Fungi,and Archegoniate)	1. The students became familiarize with concept of Microbes. 2. The students became competent in understanding Algae.. 3. The students gain knowledge about Fungi and Archegoniate.

SEMESTER –II
Course outcome of B.sc Botany (General)

Course	Paper	Learning outcome
CC -1B	Plant ecology and Taxonomy	1. The students became familiarize with concept of Ecology 2. The students became competent in understanding Phytogeography. 3. The students gain knowledge about Plant taxonomy.

SEMESTER -III
Course outcome of B.sc Botany (General)

Course	Paper	Learning outcome
CC – 1C	Plant Anatomy and Embryology	❖ The students became proficient in understanding the plant anatomy and Embryology.

SEC - 1	1. Biofertilizer or 2. Herbal Technology	❖ The students became competent in gathering knowledge about Biofertilizer. ❖ The students acquire skill in understanding Herbal Technology.

SEMESTER -IV
Course outcome of B.sc Botany (General)

Course	Paper	Learning outcome
CC – 1D	Plant physiology and Metabolism	❖ The students became proficient in understanding the plant physiological process and plant metabolism.
SEC - 2	3. Medicinal Botany or 4. Floriculture	❖ The students became competent in gathering knowledge about Medicinal Botany ❖ The students acquire skill in understanding Floriculture techniques and its applications.

SEMESTER -V
Course outcome of B.Sc Botany (General)

Course	Paper	Learning outcome
DSE 1A	1. Economic Botany and Biotechnology. or 2. Analytical Techniques in Plant Sciences. or 3. Bioinformatics	❖ The students acquire knowledge about cultivated plants,cereals,legumes,spices and beverages. ❖ The students become familiarize about different Analytical Techniques in Plant Sciences. The students gather knowledge about Bioinformatics.
SEC - 3	1. Nursery and Gardening. or 2. Plant Diversity and Human Welfare.	❖ The students became competent in gathering knowledge about Nursery and Gardening. ❖ The students can develop skill about Plant Diversity and Human Welfare.

SEMESTER - VI
Course outcome of B.Sc Botany (General)

Course	Paper	Learning outcome
DSE 1B	4. Cell Biology,Genetics and Molecular Biology. or 5. Research Methodology. or 6. Dissertation	❖ The students acquire knowledge about cell organelle,mutation,linkage crossing over, mitosis meiosis,cell wall,cell membrane,cell cycle. ❖ The students become familiarize about different types of research methodology relatedto biology.
SEC - 4	3. Ethnobotany. or 4. Mushroom cultivation technology or 5. Intellectual property rights	❖ The students became competent in gathering knowledge about Ethnobotany. ❖ The students can develop skill about Mushroom cultivation and Technology. ❖ The students acquire skill about Intellectual property rights.