

Course Outcome – CBCS SYSTEM

Subject – Botany

Vidyasagar College For Women

Department of Botany

B.Sc HONS. CORE COURSE

Year Of Introduction - 2018

COURSE CODE	COURSE NAME	SEMESTER	COURSE OUTCOME
CC1	PHYCOLOGY AND MICROBIOLOGY	I	<ol style="list-style-type: none"> <li>1. Students will have the knowledge of different types of Algae and microbes . They will be able to identify different types of algae.</li> <li>2. It will enable the students about the application of algae for the wellbeing of society and the role of algae for the conservation of ecosystem.</li> <li>3. They will have the idea to differentiate virus and bacteria as well as beneficial and harmful role of virus and bacteria. The practical experience of subculturing ,staining of bacteria will help them to apply it in higher education and research.</li> </ol>
CC2	MYCOLOGY AND PHYTO-PATHOLOGY	I	<ol style="list-style-type: none"> <li>1. Students will be acquainted with Fungal morphology, reproductive modes and behaviour which will be helpful to pursue further accounts.</li> <li>2. After getting the knowledge of life history of different fungi and their classification they will be able to identify and classify different fungi in real life situations.</li> <li>3. They will have the knowledge of different types of Mycorrhiza and Lichen. The knowledge about the role of Mycorrhiza in Agriculture and Forestry will inspire the students to deal or research with those Mycorrhiza in practical life for better productivity.</li> <li>4. Students will know the economic and ecological importance of lichen which will help them to be more conscious about the environment.</li> <li>5. Students will gain the knowledge of Host Pathogen/Parasite relationship, Plant Diseases . They will also have the knowledge of identifying different pathological specimens, inoculation of fruit ,subculturing , isolation of pathogen from diseased leaf, sterilization process which they can apply in real life.</li> </ol>

CC3	PLANT ANATOMY	II	<ol style="list-style-type: none"> <li>1. The knowledge of plant cell, tissue, growth forms, primary and secondary structure of stem and root will enable them to identify and differentiate monocot and dicot plant .</li> <li>2. The ecological anatomy will help them to understand the features of Hydrophytes and Xerophytes . They can apply the plant anatomical knowledge in systematics, forensics and pharmacognosy.</li> </ol>
CC4	ARCHEGONIATE	II	<ol style="list-style-type: none"> <li>1. Knowledge of classification and phylogeny of Bryophytes, general characteristics and life history of different bryophytes will prepare the students to identify the bryophytes ,their habitats their origin. After having the knowledge of role of Bryophytes in plant succession, pollution monitoring and economic importance of Bryophytes students will also be able to make other aware about the bryophyte and environment relationship to conserve the environment.</li> <li>2. The theoretical knowledge and field visit will make students aware about the natural habitat of Bryophyte, Pteridophytes and Gymnosperm.</li> <li>3. They will have the knowledge to recognize major groups of vascular plants.</li> <li>4. Students will be acquainted with the geological time scale ,fossils.</li> <li>5. They will know the economic importance of Pteridophytes and gymnosperms which will make the students more concerned about the value of these plants and their conservation.</li> </ol>
CC5	PALEOBOTANY AND PALYNOLOGY	III	<ol style="list-style-type: none"> <li>1. Students will be introduced with the knowledge Geological time scale ,fossilization process, different fossils.</li> <li>2. They will gain the knowledge of Fossil - Pteridophytes ( <i>Rhynia</i>, <i>Lepidodendron</i>, <i>Calamites</i> ) , Fossil – Gymnosperms (<i>Lyginopteris</i>, <i>Williamsonia</i>, <i>Cordaites</i>).</li> <li>3. They will get the idea of Indian Gondwana System. From the idea of mega-fossil assemblage they could reconstruct the then forest types.</li> <li>4. From Palynological studies students will get to know the spores and pollen types , their aperture types. The fossilized and extinct varieties of spores and pollens can also be studied by the students.</li> <li>5. The applied palynological knowledge will be helpful in case of Forensic investigation.</li> </ol>

CC6	REPRODUCTIVE BIOLOGY AND ANGIOSPERMS	III	<ol style="list-style-type: none"> <li>1. Students will get the knowledge of types and examples of Inflorescence and fruits which will further help them to identify different Plant Families and species.</li> <li>2. From Embryological studies students will be acquainted with Fertilization process, Pre and post fertilization changes, Polyembryony and apomixis.</li> </ol>
CC7	PLANT SYSTEMATICS	III	<ol style="list-style-type: none"> <li>1. Students will have the basic knowledge of Nomenclature, identification, Classification, Taxonomy and its different phases.</li> <li>2. They will gain the knowledge of Bentham and Hooker's classification, Cronquist, Takhtajan's classification system and APG(III) classification which will make them able to classify plant groups and identify families according to the characteristics.</li> <li>3. They will get brief idea of phenetics and cladistics.</li> <li>4. Students will learn to prepare Herbarium sheets, will be able to arrange them according to particular system of classification.</li> <li>5. Visit to Botanical Garden and different Local area will help them to identify different local flora and they will get the knowledge of herbarium.</li> </ol>
CC8	PLANT GEOGRAPHY, ECOLOGY AND EVOLUTION	IV	<ol style="list-style-type: none"> <li>1. Students will learn theoretical and practical aspect of geographical regions of India, which will enable them to recognise the different phytogeographical regions.</li> <li>2. They will have the knowledge of ecology, biodiversity and evolution of plants. Which will make them conscious about the environment and conservation of biodiversity.</li> </ol>
CC9	ECONOMIC BOTANY	IV	<ol style="list-style-type: none"> <li>1. This study will help them to understand about the origin of cultivating plants, their domestication, evolution and importance of germplasm diversity.</li> <li>2. It will make them understand about some economically plants like cereals, legumes, spices, beverages, timber yielding plants, fibre yielding plants.</li> <li>3. They will also have the knowledge of some drug yielding plants, their processing, their uses and health hazards.</li> <li>4. They will learn about the habits, morphological structures and identification of some economically plants in the field and laboratory.</li> </ol>

CC10	GENETICS	IV	<ol style="list-style-type: none"> <li>1. Students will have the understanding of fundamentals about the genetics.</li> <li>2. They will understand the inheritance pattern of genes and molecular mechanism behind gene segregation.</li> <li>3. They will understand about structure, organisation of gene.</li> <li>4. Experiments will make them aware about the effects of pollutants and pesticides exposure to the plants.</li> </ol>
CC11	CELL AND MOLECULAR BIOLOGY	V	<ol style="list-style-type: none"> <li>1. It will help them to understand the evolution of eukaryotic cell, principles behind DNA replication, transcription and translation which are very important to create a clear concept about how life is maintained and how different enzymes and procedures require to maintain cell at its form.</li> <li>2. They will be acquainted with gene regulation, genetic code and cancer biology.</li> </ol>
CC12	BIOCHEMISTRY	V	<ol style="list-style-type: none"> <li>1. This will help them to know about the different biochemical reactions, bonds, molecules of life, energy flow, cell membrane and phosphorylation.</li> <li>2. They will be able to prepare solutions and buffers, estimate glucose, urease activity, catalase activity.</li> <li>3. Through experiment they will be able to detect organic acid, carbohydrate and protein from different plant samples and nature of carbohydrates, which will help them for further studies and research work.</li> </ol>
CC13	PLANT PHYSIOLOGY	VI	<ol style="list-style-type: none"> <li>1. This will help the student know about mineral nutrition, different physiological processes inside a plant body.</li> <li>2. Gain knowledge about plant growth hormones, seed dormancy, photoperiodism, biological clock.</li> </ol>
CC14	PLANT METABOLISM	VI	<ol style="list-style-type: none"> <li>1. Students will be acquainted with the knowledge about photosynthesis, respiration, nitrogen metabolism and lipid metabolism.</li> <li>2. They will get the basic idea of chromatography through which they will be able to separate plastidial pigments.</li> <li>3. They will learn how to measure oxygen uptake by respiring tissue and effect of HCO<sub>3</sub> concentration on oxygen evolution during photosynthesis.</li> </ol>