

**BSC - BOTANY**

Semester I/II/III/IV/V/VI	All Subjects / Course	Objective of teaching the subject (Minimum 4)	OUTCOMES
SEMESTER I	PAPER I PLANT DIVERSITY USBO101	Understand the diversity among Algae,Fungi & Bryophytes ,Also know the systematic ,structure ,morphology of Algae,Fungi ,Bryophytes	The students will develop understanding about the diversity, identification, classification and economic importance of lower plants
		Know the economic importance of Algae & Fungi	
		To understand range of thallus in Chlorophyta & Variety of Shapes of Chloroplasts seen in chlorophyta	
		To understand nutrition in Fungi	
	PAPER II FORM AND FUNCTION I USBO102	To understand the basic unit of life - Cell & its Organelle,Structure & Organization of Cell membrane	1.They understand the pattern of inheritance of various life forms. 2. They develop a strong fundamental basics for further molecular studies. 3 The various environmental factors governing the ecosystems are clearly understood. 4.They will be understand the concept, types, development and functions of various ecosystems and their communication.
		To understand interactions taking place in the ecosystem & energy flow in an Ecosystem .	
		Learners learn Biomes of the World ,Ecological Pyramids.	
		To understand Phenomenon of Inheritance,Mendelism,Post Mendelian Genetics,Different types of Gene interaction,Multiple Alleles	
SEMESTER II	PAPER I PLANT DIVERSITY USBO201	To understand the Morphological diversity of Pteridophytes & Gymnosperms	1.The students develop the basic understanding of important characteristics, anatomy, reproduction and evolution along with economic importance of Pteridophytes & Gymnosperms. 2.The students learns the systematic position of Generas, Species and, Families. 3. The students develop knowledge about plant nomenclature.
		Become aware of applications of different plants in various industries.	
		To highlight the potential of these studies to become an entrepreneur	
		To Understand the morphology of various parts of flowering plants & Taxonomy	
		Learn the taxonomical terminology	
	PAPER II FORM AND FUNCTION I USBO202	To understand tissue system in Plants,Internal structure of surrounding plants	The Students understand the Photosynthetic mechanism, normal Anatomy of plants & Grandma's pouch.
		To understand the process of Photosynthesis in higher plants with particular emphasis on light & Dark reactions,	
		Learn differences among C3,C4 and CAM plants	
Gain knowledge of Herbal medicines & their use in treating various ailments.			

<b>SEMESTER- III</b>	<b>Paper I Plant DiversityUSBO301</b>	To Know the systematics, morphology, structure and life cycle of Phaeophyta.	<p>1.The students develop understanding about the identification, classification Of Brown Algae,Anthocertae &amp; Musci</p> <p>2. economic importance of Brown Algae.</p> <p>3.The students will know about the systematic position of Generas, Species and, Families.</p> <p>4. The students develop knowledge about plant nomenclature &amp; modern techniques to study Plant Diversity.</p>
		Know the conceptual development of “taxonomy” and “systematics”	
		Understand the Phylogeny of Angiosperms -A general account of the origin of Angiosperms.	
		Able to understand preservation of plant materials and understand the Principle, working and applications of modern techniques viz, Microscopy, Chromatography and Electrophoresis.	
		Know the taxonomic position,Occurence,thallus structure,reproduction of Bryophytes.	
<b>SEMESTER- III</b>	<b>Paper II Forms and Function-II USBO302</b>	To Gain knowledge of “Cell Science”.	<p>They understand the cell Cycle &amp; principle mechanisms of genome replication, maintenance, function and regulation of expression.</p>
		The eukaryotic cell cycle ,mitotic and meiotic cell division	
		Learn the scope and importance of Molecular Biology.	
		Understand the Chromosomal Aberrations & study various Syndromes observed in Human Population.	
		Understand organelles heredity.	
		Understand the biochemical nature of nucleic acids, their role in living systems, experimental evidences to prove DNA as a genetic material.	
		Understand the process of synthesis of Proteins and role of genetic code in polypeptide.	
		Gain knowledge about the mechanism and essential component required for prokaryotic and eukaryotic DNA replication.	

<b>SEMESTER- III</b>	<b>Paper III Current Trends in Plant Sciences-IUSBO303</b>	Understand the Indian pharmacopoeia.	To gain proficiency in the monograph study & forest vegetation ,The student will enrich themselves with the phenomenon of metabolism of primary and secondary metabolites and their role in plants.
		Understand the various secondary metabolites, their sources, uses and adulterants.	
		Understand the various types of forest and vegetation in India.	
		Augementation in knowledge and their uses of various economic plants in India.	
		Become aware of applications of different plants in various industries.	
		To equip the students with skills related to laboratory as well as industries based studies.	
		Understand the Chemical contents of the plant products.	
		To highlight the potential of these studies to become an entrepreneur.	
		Understand the role of plants in human welfare.	
<b>SEMESTER-IV</b>	<b>Paper I Plant Diversity USBO401</b>	Understand Identification & Control measures of Plant diseases.	Learners get knowledge of control of plant diseases,Fossil study
		Understand and able to identify the various types of lichens & to know uses	
		Understand and know the basic silent features and classification of Pteridophyta.	
		Understand the Geological time scale and types of fossils.	
		Understand the importance of Gymnosperms to Human welfare	
		Know the concept of methodology in taxonomy and various Classification systems.	

SEMESTER-IV	Paper II Forms and Function-II USBO402	Know the scope and importance of the discipline.	-
		Understand Plant communities and ecological adaptations in plants.	
		Gain knowledge about "Cell Science".	
		Understand the Biochemical nature of cell.	
		Understand the different types of interaction in Biomolecules.	
		Know importance and scope of plant physiology.	
		Understand the respiration in higher plants with particular emphasis on aerobic and anaerobic respiration.	
		Gain the knowledge of plants response mechanism.	
		Understand the role plants in human welfare as well as ecology.	
		Gain knowledge about various environment cycles and their impact on eco-system as well as human-life.	
SEMESTER-IV	Paper III Current Trends in Plant Sciences-I USBO403	To Understand branches of Horticulture ,Gardening Skills and types of Garden	<p>1.The students acquire knowledge of basic principles and applications of recombinant DNA technology.</p> <p>2.The students will learn about Concepts, tools and techniques related to <i>in vitro</i> propagation of plants.</p> <p>3.The students gain basic knowldge of Horticulture &amp; Gardening.</p> <p>4. They will developed firm base for hardwares, softwares, networking, processing of computers.</p> <p>5. They are able to understand the designing and function of various databases and bioinformatic resourses.</p> <p>6. They are able to select specific softwares and tolls to solve certain biological problems with respect to Nucleotides and Proteins.</p>
		To know various National parks and Botanical Gardens.	
		Understand the fundamentals of Recombinant DNA Technology.	
		Understand the basic concepts of Statistics & apply them	
		Understand the principle and basic protocols for Plant Tissue Culture.	
		Understand the PTC knowledge and its important in conservation of various RET plants.	
		Gain the knowledge about collecting, analysing and interpreting data.	
		Gain the applied knowledge of unprecedented IT tools.	
		Understand the data organization and tools in Bioinformatics.	