	Programme:	M.Sc., BOTANY		
	PO Code	**Programme Outcomes**		
	PO1	To create interest in the students to pursue research on plant sciences		
	PO2	To use research based knowledge and modern technology to develop herbal products.		
	PO 3	To gain knowledge of simplest life forms to most evolved plants.		
	PO 4	To inculcate entrepreneurship skills applied botany and agro-based techniques.		
	PO 5	To understand and appreciate the diversity of Flora.		
	PO 6	To foster interaction of students regarding conservation of endemic plants		
Semester	**Course Code**	**Course Name**	**CO Code**	**Course Outcomes**
I	MBOT1DNVP1 CC-01	Diversity of non vascular plants Part-I	CO 1	To differentiate the various microbes and their effects on plants and humans.
			CO 2	To learn the classification of the lower plant forms and also their structures and life cycles.
			CO 3	To understand the gene regulation in the cells
			CO 4	To decipher the diseases of plants and how to tackle them

			CO 5	To learn the biochemical functioning of the cells.
			CO 6	To understand the cell components of simplest life forms.
I	MBOT1DNVPII CC-02	Diversity of Non Vascular Plants Part II	CO 1	To study a few forms of Bryophytes and their economic importance.
			CO 2	To understand the characteristics and phylogeny of the group Bryophyta and their classification.
			CO 3	To understand the characteristics of the primitive group of algae, the cyanobacteria.
			CO 4	To understand the features of algae and their classification.
			CO 5	To study a few representatives of some of the algal classes.
			CO 6	To understand the significance of this group of thallophyte- the algae.
I	MBOT1DVPPC C-03	Diversity of vascular plants (Pteridophytes and Gymnosperms) and Paleobotany	CO 1	The student gains knowledge about the diversity among the initial group of vascular plants.
			CO 2	The student will be able to understand the general characteristics and classification of the different members of pteridophytes which are the first group of vascular plants.
			CO 3	The student will be able to understand the general characters of gymnosperms and the classification of the different members of the group.
			CO 4	The student will be able to analyze the detailed lifecycle pattern of selected members of pteridophytes and gymnosperms.
			CO 5	The student will be able to appreciate the evolutionary significance and distribution of these plants.

			CO 6	The student will be able to connect the similarities and realize the importance of the various fossil forms of plants.
I	MBOT1MPACC-04	Medicinal plants and their application	CO 1	Classification & analysis of poisonous and allergic plants.
			CO 2	Discuss the remedial plants for different human and plant diseases.
			CO 3	Discuss the importance of medicinal plants, it's database at the national and international level, commercial importance and concept of ethnobotany and discuss the tribes of India.
			CO 4	To understand the history of medicinal plants, concept of AYUSH and Bach's flower remedy.
			CO 5	To understand what are psychoactive plants, their classification and uses.
			CO 6	Discuss the sources of marine drugs, natural pesticides and antibiotics.
II	MBOT2AECC-05	Anatomy and Embryology	CO 1	The students will be able to understand the development of reproductive organs of a plant and get knowledge on endosperm and its relationship with embryo development
			CO 2	The students will be able to apply skills in apomixis and polyembryony technique
			CO 3	The students will be able to understand the origin of different meristems
			CO 4	Students would be able to understand the structure of vascular tissues and able to differentiate anatomically between monocot and dicot species and Able to understand structural and developmental aspects of various cells and tissues

			CO 5	Able to understand the role of anatomy in food adulteration and forensic studies
			CO 6	Able to learn the anatomical details of various plants adapted to different environmental conditions
II	MBOT2EPCC-06	Ecology and Phytogeography	CO 1	Gain knowledge on the differnt methods used to study plant geography
			CO 2	Foster interaction of students on the impact of pollution on health
			CO 3	Realize the need for the use of non conventional sources of energy
			CO 4	Understand the role played by abiotic and biotic factors in maintaining homoeostasis in differnt ecosystems
			CO 5	Instill a concern for maintaining a clean envronment and help in sustainable solutions
			CO 6	Use research based knowledge and modern technology to provide baseline data for biodiveristy assessment and to conserve natural resources
			CO 1	in structure, classification and function of the building blocks of life like carbohydrates, proteins and enzymes.
			CO 2	The student will be able to analyze the mechanism by which plants are taking up water and minerals and using it for their nutrition.
			CO 3	The students will gain knowledge about photosynthesis which is the process by which plants prepares food in the presence of light.

II	MBOT2PPCC-07	Plant Physiology	CO 4	The student will get to know how the plants translocate the food that is prepared primarily in the leaves to the different parts of the plant.
			CO 5	The student will be able to appreciate the different types of respiration happening in plants.
			CO 6	The student will understand the importance of the role of different plant growth regulators and their mode of action in plants.
			CO 7	The student will be able to distinguish between the different plant movements.
II	MBOT2HWICC-08	Herbal Wealth I	CO 1	Appreciate the importance of food flavors and plant sweeteners
			CO 2	Understand the need and importance of raw drug repository
			CO 3	provide information on the use of common medicinal plants from their herbal garden to meet their primary healthe care needs
			CO 4	provide information on cultivation, extraction of active principles and quality control of some important mediincal plants
			CO 5	Encourage students to actively participate in maintaining a home herbal garden
			CO 6	Provide data for assessment of conservation status of a species and cataloguing of rare and endangered species for conservation programmes
			CO 1	Inculcates an appreciation for fundamentals of Angiosperm systematics

III	MBOT3TAEC-01	Taxonomy of Angiosperms	CO 2	Appreciate the basic concepts and principles of plant systematics
			CO 3	Introduces to adequate characterization of plants along with correct identification
			CO 4	Introduces the students to identification, nomenclature and classification of plants
			CO 5	Throws insight into new facts and methods to approach in taxonomy
			CO 6	taxonomic relationship in plant systematic sutdies
III	MBOT3CPBEEC-02	Cytogenetics, Plant Breeding and Evolution	CO 1	The students will be able to understand difference between euchromatin and heterochromatin and aberrations in chromosomes and Able to learn the different processes involved in the cell division
			CO 2	Able to learn the structure and functions of different cell organelles
			CO 3	Successfully able to understand the formation and development of cell through cell cycle
			CO 4	The students will be able to understand the process of mutations and protein synthesis in organisms
			CO 5	Able to understand the role of genes in transporting information and variations in the organisms

			CO 6	Able to get knowledge about hybridization technique and apply in the improvement of agricultural and horticultural crops and Knowledge about population genetics which helps to work on gene level
III	MBOT3HWIIIEC-03	Herbal Wealth II	CO 1	To understand the basic concepts of radioactivity and techniques used for its detection
			CO 2	To expose them to different spectroscopic techniques for structural analysis of organic compounds
			CO 3	To understand the principles of light along with various kinds of microscopy
			CO 4	Students will be exposed to basic laboratory skills on microbiology, micro techniques, centrifugation and chromotography
			CO 5	To introduce the students to various techniques and methods involved in plant science which will enable them to pursue various research techniques
			CO 6	To expose the students to basic of camera and photography
III	MBOT3APEC-	Applied Phycology	CO 1	Analyze the role of algae as nitrogen fertilizer, nutrient supplement
			CO 2	Understand the mechanism of immobilization in algae
			CO 3	Assess the water quality, cultivation methods of algae

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			CO 5	Gain knowledge on distribution and ecology of algae
			CO 6	Understand the tissue culture and biotechnology methods in algae
IV	MBOT4APPEC-05	Advanced Plant Physiology	CO 1	The student will be able to appreciate the various metabolic activities happening in plants.
			CO 2	The student will gain knowledge about the importance of secondary metabolites in plants.
			CO 3	The student will learn about the significance of dormancy and analyze the methods to break it and the various mechanisms involved in it.
			CO 4	On the whole, the student gains competence in knowing the advanced aspects of plant physiology
			CO 5	The student realizes the importance of the effect of stress on plants and also understands the signaling pathways associated with it.
IV	MBOT4BMBEC-06	Biotechnology and Molecular Biology	CO 1	Gain knowledge on importance of morphogenesis in plants
			CO 2	Analyze transformation and fermentation techniques in the field of industry
			CO 3	Understand DNA replication and mechanism
			CO 4	Will be able to understand the tools in genetic engineering

			CO 5	Gain knowledge on the Intellectual property rights
			CO 5	Analyze invitro propagation techniques
IV	BOT4TTPSDSEEC	Tools and Techniques in Plant Science	CO 1	Ability to gain knowledge on different analytical techniques
			CO 2	The students will learn the working principle of different instruments and applications of the instruments for identification, separation and purification of active principles in plants
			CO 3	The knowledge of analytical techniques would help the students for choosing a carrer in pharmaceutical, research and allied industries
			CO 4	Students will be exposed to design / conduct experiments and analysing it for their independent research projects
