DEPARTMENT OF BOTANY

B. Sc. Botany

Course Outcomes

F. Y. B.Sc. Botany

Course 111: Plant Diversity, Plant Morphology and Anatomy
After successfully completing this course, students will be able to:

CO1: outline cryptogams and phanerogams.

CO2: Define general characters of cryptogams and Phanerogams.

CO3: Classify the members of plants groups in to cryptogams and Phanerogams.
CO4: Describe the Life cycle of plant forms of cryptogams and Phanerogams.

CO5: Identify lichens and their economic value.

CO6: Discuss morphology of vegetative and reproductive parts of plants.
CO7: Describe anatomy of Monocot and dicot plants.

CO8: Explain types of plant tissues.

Course 112: Industrial Botany

After successfully completing this course, students will be able to:
CO1: Define industrial botany.

CO2: Use the potential of plants for human welfare in day to day life;
CO3: Describe botanical concepts, including plant anatomy.

CO4: Differentiate usage of plants for food, medicine, building materials, stimulating beverages, and for their psychoactive effects.

CO5: Discuss conservation and sustainable use of plants.

CO6: Explain and demonstrate the impact that plants on human society
CO7: Address the socio-economic challenges related to plant sciences.
CO8: Demonstrate the methods of cultivation of mushrooms.

Course: Practical Botany -I

After successfully completing this course, students will be able to:

CO1: Recognize the live forms of Cryptogamic and Phanerogamic plants.
CO2: Analyse and describe botanical concepts, including plant anatomy.

CO3: Differentiate usage for food, medicine, building materials, stimulating beverages, and for their psychoactive effects.

CO4: Explain conservation and sustainable use of plants;

CO5: Explain and demonstrate the impact that plants have on human society

CO6: Illustrate the floral parts, fruits, leaves and their types.

CO7: Identify industrial applications of plants resources for welfare of human being and their techniques.

CO8: Categorize the plants into Monocot and Dicot on the basis of anatomical characters.

S. Y. B.Sc. Botany

BO 211: **Taxonomy of Angiosperms and plant community**

After successfully completing this course, students will be able to:

CO1: Define plant taxonomy and taxonomic related terminologies.
CO2: Explain classification systems of angiosperms.

CO3: Use required data sources for classification of angiosperms.
CO4: Determine Botanical Nomenclature of angiosperm plants.
CO5: Recognize ecological plant groups with examples.

CO6: Explain plant families with examples.

CO7: Apply proper herbarium methods - collecting, mounting, and keeping records.
CO8: Execute computer knowledge in plant taxonomy and digital herbarium.

BO 212: **Plant Physiology**

After successfully completing this course, students will be able to:

CO1: Define the terminologies: Plant water relations, Growth, Transpiration, Ascent of Sap, Plant growth regulators and Nitrogen metabolism.

CO2: Explain processes of mineral nutrition, absorption of water, ascent of sap,

mechanisms of water loss from plants.

CO3: Demonstrate processes imbibition, Osmosis, Diffusion and Plasmolysis, measure growth by arc auxanometer, Bose Cresco graph.

CO4: Describe Plant growth regulators and their types.
CO5: Discuss nitrogen metabolism in plants

CO6: Explain mechanisms and application of photoperiodism
CO7: Explain Mechanism of vernalisation.

CO8: Classify the plants based on Photoperiodism.

BO 213: Plant Anatomy & Embryology

After successfully completing this course, students will be able to:

CO1: Define terms related to plant Anatomy, Embryology.

CO2: Describe various tissue systems in plants like epidermal, mechanical and vascular.

CO3: Interpret the Principles involved in distribution of mechanical tissues.
CO4: Explain the process of normal and abnormal secondary growth in plants.
CO5: Differentiate between normal and abnormal secondary growth.

CO6: Identify the process of pollination and fertilization.

CO7: Discuss the Structure and development process of male and female gametophyte
CO8: Illustrate the types of microspore, ovules, embryo, seed and endosperm.

BO 213: **Plant Biotechnology**

After successfully completing this course, students will be able to:

CO1: Define the terminologies related to plant biotechnology.
CO2: Describe the fermentation process.

CO3: Explain enzyme technology and their industrial scale production.
CO4: Interpret the production of Single cell proteins.

CO5: Illustrate the concept of phytoremediation.

CO6: Describe General method of gene isolation from the plants and their application.
CO7: Explain Methods of gene, transfer in plants.

CO8: Illustrate Application of plant genetic engineering and Nano-biotechnology in crop improvement.

BO 213: Practical Paper III

After successfully completing this course, students will be able to:

CO1: Define the botanical terms to identify the plant families.
CO2: Identify the plant families.

CO3: Draw the floral diagram of plants belonging to specific families.

CO4: Demonstrate physiological experiments, fermentation and fermentation products.

CO5: Calculate water holding capacity, pH, plasmolysis, DPD
CO6: Describe internal morphology of plant organs.

CO7: Describe the Transpiration process.

CO8: Demonstrate the Electrophoresis and its use.