Department of Botany

Course: B.Sc Botany

COURSE OUTCOMES (COs)

I – Semester

ANGIOSPERM ANATOMY, REPRODUCTIVE BOTANY AND PALYNOLOGY

1. Demonstrate the ability to differentiate plant organs by observing anatomical features.
2. Understand the non-living inclusions of plants and their significance.
3. Differentiate tissues and their functions.
4. Illustrate primary and secondary (normal and anomalous) structures of plant organs.
5. Explain various developmental details of angiosperms.
6. Realize the significance and applications of palynology

II – Semester

MICROBIOLOGY, MYCOLOGY, LICHENOLOGY AND PLANT PATHOLOGY

1. Understand basics of microbial life and their economic importance.
2. Develop general awareness on the diversity of microorganisms, fungi and lichens.
3. Analyze the ecological role played by bacteria, fungi and lichens
4. Identify plant diseases and find out control measures.
5. Realize the significance of plant diseases as far as crop production is concerned.

III – Semester

PHYCOLOGY, BRYOLOGY AND PTERIDOLOGY

1. Appreciate the diversity and evolutionary significance of lower plant groups.
2. Classify algae, bryophytes and pteridophytes.
3. Understand the economic and ecological importance of lower plant groups.

IV– Semester

METHODOLOGY AND PERSPECTIVES IN PLANT SCIENCE

1. Develop scientific temper and problem solving skills.
2. Undertake scientific projects and prepare project reports
3. Summarize, organize and display quantitative data and derive conclusions
4. Prepare permanent slides, applying the histochemical techniques

V – Semester

GYMNOSPERMS, PALAEOBOTANY, PHYTOGEOGRAPHY AND EVOLUTION

1. Understand the role of gymnosperms as a connecting link between pteridophytes and angiosperms

2. Appreciate the process of organic evolution.
3. Realize the importance of fossil study.
4. Understand the climatic conditions of the past and realize the changes happened
5. Recognize the phytogeographic zones of India

ANGIOSPERM MORPHOLOGY AND SYSTEMATICS

1. Appreciate the diverse morphology of angiosperms.
2. Identify and classify plants based on taxonomic principles.
3. Make scientific illustrations of vegetative and reproductive structures of plants.
4. Develop the skill of scientific imaging of plants.
5. Realize the importance of field study.
6. Change their attitude towards over exploitation of rare/endemic plants.

TISSUE CULTURE, HORTICULTURE, ECONOMIC BOTANY AND ETHNOBOTANY

1. Critically evaluate the advantages of tissue culture and horticulture over conventional methods of propagation.
2. Apply various horticultural practices in the field.
3. Experiment on the subject and try to become entrepreneurs.
4. Identify the economically important plants.

CELL BIOLOGY AND BIOCHEMISTRY

1. Appreciate the ultra-structure of a plant cell.
2. Enumerate the functions of each cell organelle.
3. Draw and explain the structure of biomolecules.

VI – Semester

GENETICS AND PLANT BREEDING

1. Appreciate the facts behind heredity and variations.
2. Understand the basic principles of inheritance.
3. Solve problems related to classical genetics.
4. Predict the pattern of inheritance.
5. Understand various plant breeding techniques.
6. Realize the role of plant breeding in increasing crop productivity

BIOTECHNOLOGY, MOLECULAR BIOLOGY AND BIOINFORMATICS

1. Analyze the role of biotechnology in daily life.
2. Understand the basic aspects of bioinformatics.
3. Explain the concepts in molecular biology.

PLANT PHYSIOLOGY AND METABOLISM

1. Identify the physiological responses of plants.
2. Analyze the role of external factors in controlling the physiology of plants.
3. Explain the metabolic processes taking place in each cell.

4. Appreciate the energy fixing and energy releasing processes taking place in cells.

ENVIRONMENTAL SCIENCE

1. Realize the importance of ecological studies.
2. Develop environmental concern in all their actions and practise Reduce, Reuse and Recycle.
3. Try to reduce pollution and environmental hazards and change their attitude towards throwing away plastic wastes.
4. Spread awareness of the need of conservation of biodiversity and natural resources.
5. Analyze the reasons for climate change and find out ways to combat it.

GENETICS AND CROP IMPROVEMENT

1. Understand various techniques employed for increasing crop productivity.
2. Identify diseases affecting crop plants.
3. Attain general awareness on various crop research stations of the country.