

BOTANY DEPARTMENT

COURSE OUTCOME (SESSION 2022-2023)

Semester -Odd

Department: Botany

Class : B.sc 1st Semester

Paper Code-101

Nomenclature of the Paper: Diversity of Microbes

COURSE OUT COME:

1. Study of microbes and cryptogams to understand their Diversity.
2. Know the systematic, morphology and structure of virus, bacteria, algae, fungi, lichens.
3. Know life cycle pattern and economic importance of microbes and cryptogams.
4. Learners will also be able to explain their impact on environment, human welfare and role in industries.
5. Understanding the evolutionary significance of these organisms

Class : B.sc Ist Semester

Paper code: Bot-102

Nomenclature of the paper: Cell Biology

COURSE OUT COME: After completing this course,

- 1: Students will understand the fundamental characteristics of cells.
- 2: Students will acquire comprehensive knowledge about cell division and the central dogma of molecular biology
- 3: Students will develop a thorough understanding of mutations and chromosomal aberrations
- 4: Students will be able to understand the basic principles of cell division processes, chromosome mapping, and chromosomal aberration.

Class : B.sc 3 rd Semester

Paper code:Bot-201

Nomenclature of the paper: BIOLOGY AND DIVERSITY OF SEED PLANTS-I

COURSE OUT COME: After completing this course,

1. Students will acquire knowledge about the fundamental features of gymnosperms.
2. Students will acquire a foundational understanding of Gymnosperms morphology.
3. Student will gain the knowledge about the practical aspects related to identification, structure, economic values of gymnosperms, and angiosperms
4. Students will acquire a foundational understanding of Palaeobotany and common Fossil Plants.

Class : B.sc 3 rd Semester

Paper Code BOT-202

Nomenclature of the Paper: Plant Anatomy

COURSE OUT COME:

1. Objective of the paper is to impart knowledge to students about the tissue systems, root shoot and leaf anatomy.
2. Study Cambium and its functions along with Secondary growth including anomalous secondary growth.

Class : B.sc 5 th Semester

Paper Code- Bot-301

Nomenclature of the Paper: Plant Physiology

COURSE OUT COME: This course

1. Impart knowledge to students about the functional aspects of plant physiological reactions like ascent of sap, transpiration, translocation of nutrients.
2. Basic biochemical reactions in energy transformation in photosynthesis, respiration and nitrogen and lipid metabolism in relation to its dynamic environment

3. Study of structure, classification and mechanism of enzyme action

Class : B.sc 5th Semester

Paper code: Bot-302

Nomenclature of the paper: Ecology

COURSE OUT COME: After completing this course,

- Students will gain knowledge about Ecology and Environmental interactions.
- Students will acquire a conceptual understanding of ecosystem structure, environmental pollution and biodiversity conservation.
- Students will be able to understand global environmental issues affecting climate change

Semester –EVEN

Class : B.sc 2nd Semester

Paper Code-101

Nomenclature of the Paper: Diversity of Archegoniates

COURSE OUT COME: After completing this course students will

1. Study microbes and cryptogams to understand their Diversity.
2. Know the systematic, morphology and structure of bryophytes, and Pteridophytes.
3. Know life cycle pattern and economic importance of Archegoniates
4. Evolution of stellar system in Fern-allies and Ferns.
5. Learners will also be able to explain their impact on environment, human welfare and role in industries
6. Understanding the evolutionary significance of these organisms

Department: Botany

Class : B.sc 2nd Sem.

Paper code: Bot-102

Nomenclature of the paper: Genetics

COURSE OUT COME: After completing this course,

- Students will acquire comprehensive knowledge about cell division and the central dogma of molecular biology.
- Students will learn about the principles of inheritance in biology.
- Students will develop a thorough understanding of mutations, chromosomal aberrations, and the concept of linkage.
- Students will be able to understand the basic principles of laws of inheritance,

Class : B.sc 4th Semester

Paper code: Bot-201

Nomenclature of the paper: BIOLOGY AND DIVERSITY OF SEED PLANTS-II

COURSE OUT COME: After completing this course,

1. Students will gain knowledge about taxonomy, including the rules of nomenclature and other essential aspects.
2. 2: Students will acquire a conceptual understanding of angiosperm classification systems and the diversity of families within them
3. Students will gain the knowledge about the diagnostic features, morphology, internal structure, economic value of angiosperms.

Class : B.sc 4 th Semester

Paper Code-Bot-202

Nomenclature of the Paper: Plant Embryology

COURSE OUT COME: After completing this course

1. Students learn about the vegetative propagation and applications in floriculture and horticulture.
2. Know about structure and development of flower and inflorescence types.
3. Also learn sexual reproduction in angiosperm, structure of male and female gametophytes and post fertilization changes.

Class : B.sc 6 th Semester

Paper Code-Bot-301

Nomenclature of the Paper : Biochemistry & Plant Biotechnology

1. Students learn about the different technologies in biology of plants to understand its growth, growth kinetics and effect of light on germination and growth of seed and seedling under different environments.
2. Know tools and techniques of recombinat DNA technology.
3. Basic concept of plant tissue, culture, totipotency, micropropagation, anther culture, embryo culture, synthetic seeds and somatic hybridization.
4. Biotechnology and its application in human welfare with particular reference to industry, plant breeding and molecular farming.

Class : B.sc 6th Semester

Paper code: Bot-302

Nomenclature of the paper: Economic Botany

COURSE OUT COME: After completing this course,

1. Students will gain a foundational understanding of the origins of significant cultivated plants.
2. Students will develop a conceptual understanding of important plants that yield vegetables, fiber, and oil.
3. Students will acquire knowledge about the cultivation techniques of essential plants.
4. Students will gain a conceptual understanding of the processing methods applied to economically significant plants.
5. Students will be able to gain the knowledge of economic values of cereals, legumes, spices, oil & fibre yielding plants.