

Programme Outcomes (POs) for UG courses of Faculty of Life Sciences

1. To develop skills in graduate students to be able to acquire theoretical and practical knowledge in fundamentals of biology in respective disciplines of plants, animals, microbes and environment.
2. To inculcate ability to critically evaluate problems and apply lateral thinking and analytical skills for professional development.
3. To create awareness on ethical issues, good laboratory practices and biosafety.
4. To develop ability in youth for understanding basic scientific learning and effective communication skills.
5. To prepare youth for career in teaching, industry, government organizations and self Reliant entrepreneurship.
6. To make students aware of natural resources and environment and its sustainable Utilization.
7. To provide learning experience in students that instills deep interest in biological science for the benefit of society.

Programme Specific Outcomes (PSOs) for Botany subject of B.Sc. Medical

1. The students will be able to identify the various plants and compare the diagnostic characteristics of lower and higher groups of plants. This comparative approach will help the students to explain the evolution and degree of genetic diversity in plants.
2. The students will be able to explain the various biological processes in plants and how they are sustained and regulated at the cellular and molecular levels. Students will also be able to understand the ecology, development, and behavior of different forms of life.
3. The students will be able to describe and demonstrate the different experimental techniques and methods in various fields of plant sciences.
4. The students will also strengthen their ethical and moral values and shall be able to deal with psychological weaknesses. Students will also learn team workmanship in order to serve the institutions, industry, and society efficiently.
5. The students will possess minimum standards of communication skills expected from a Botany graduate in the country. They will also become a critical thinker and acquire problem-solving capabilities.
6. This programme will help the students in finding career opportunities in higher education in th field of plant sciences and other entrepreneurship programmes.

Semester I

After completing this course, the learner will be able to:

1. Students will be able to understand the general characteristics of bacteria, actinobacteria, viruses and fungi.
- 2: Students will develop a conceptual understanding of Phycology.
- 3: Students will gain knowledge on the concepts of Bryology.
- 4: Basic understanding of the biology of pteridophytes will be developed by the students.
- 5*. Students will gain the knowledge of practical aspects of microorganisms, algae, fungi, lichens, bryophytes, and pteridophytes.

Semester II

After completing this course, the learner will be able to:

1. Students will gain knowledge about taxonomy, including the rules of nomenclature and other essential aspects.
- 2: Students will acquire a conceptual understanding of angiosperm classification systems and the diversity of families within them.
3. Students will gain knowledge about Ecology and Environmental interactions.
- 4: Students will acquire a conceptual understanding of ecosystem structure, environmental pollution and biodiversity conservation.
- 5*. Students will gain the knowledge about the diagnostic features, morphology, and internal structure, economic value of angiosperms and ecological concepts and biodiversity indices

Semester III

After completing this course, the learner will be able to:

1. Students will acquire an understanding of various physiological processes in plants.
- 2: Students will develop a comprehensive knowledge of plant hormones.
- 3: Students will learn about photomorphogenesis and its significance.
- 4: Students will gain a conceptual understanding of plant growth and senescence, including the natural aging process of plants.

5*. Students will be able to demonstrate practical aspects and learn the basic concepts of various physiological and biochemical process of plant

Semester IV

After completing this course, the learner will be able to:

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 learn about the principles of inheritance in biology.
- 4: Students will develop a thorough understanding of mutations, chromosomal aberrations, and the concept of linkage.
- 5*. Students will be able to understand the basic principles of laws of inheritance, stains & staining techniques, cell division processes, chromosome mapping, and chromosomal aberration.