

Course Outcomes of Botany

Program Outcomes (PO)

- Students develop a comprehensive understanding of plant diversity and its crucial role in maintaining ecological balance.
- Students acquire practical skills through field and laboratory work, including interpreting plant morphology, anatomy, plant identification, and vegetation analysis techniques.
- Students learn to apply knowledge from basic and life sciences to understand fundamental plant processes.
- Student understand utilization of modern techniques and instruments practical applications for biochemical estimation, molecular biology, biotechnology, plant tissue culture experiments, and cellular and physiological studies of plants.
- Learner acquired knowledge to contribute to societal upliftment by addressing health, environmental issues, and other relevant challenges.

Semester-I

Paper : Diversity Of Microbes

- The learning outcome is an advanced academic education to broaden the knowledge in comparison to that obtained in 10 + 2 level.
- The acquired knowledge provides professional qualification for work in biological laboratories and research centers.
- After completion of course the students will understand the general characters, economic importance and life cycle of various groups of fungi, fungi, bacteria and viruses.

Paper : Cell Biology

- This paper would help the students to know the role of chromosomes and chromosomal rearrangements in generation of variations.
- They will also be familiar with methods used to change the traits of a plant to create the desired genotype/phenotype.

Semester-II

Paper : Diversity Of Archegoniates	<ul style="list-style-type: none">• After studying this paper students will be able to classify bryophytes and pteridiophytes.• They will also be able to distinguish these from other groups of plants.• They will also be able to understand origin and evolution of sporophyte in bryophytes and sporophytes.
Paper : Genetics	<ul style="list-style-type: none">• The students are expected to have better understanding of basic life processes.• It will also impart knowledge about the regulation of various metabolic pathways.

Semester-III

Paper : Biology and Diversity of Seed Plants-I	<ul style="list-style-type: none">• After studying this paper students will be able to classify gymnosperms and angiosperms.• They will also be able to describe heterospory, origin of seed habit and evolutionary trends.• Besides above, they will also be able to understand the phenomena of apogamy and apospory.
Paper : Plant Anatomy	<ul style="list-style-type: none">• The students will be able to describe the structure and development of reproductive structures and the process of reproduction in plants.

Semester-IV	
Paper : Biology and Diversity of Seed Plants-II	<ul style="list-style-type: none"> • The students will be able to understand the different systems of classification of angiosperms. • They will also be able to identify the plant sources of medicines, spices, oil, fibres, dyes, gum and timbers.
Paper : Plant Embryology	<ul style="list-style-type: none"> • The students will be able to describe the structure and development of reproductive structures and the process of reproduction in plants.

Semester-V	
Paper : Plant Physiology	<ul style="list-style-type: none"> • The students will be able to understand the recent advances in phytohormones, fruit and seed physiology. • They will also be acquainted with advances in senescence and abscission also.
Paper : Ecology	<ul style="list-style-type: none"> • By understanding the concepts of ecological principles and environmental issues, the student will be able to develop attitude, value system and ethics towards environment related issues.

Semester-VI	
Paper : Biochemistry and Plant Biotechnology	<ul style="list-style-type: none"> • The students will be able to understand the physiology and basic metabolism of plants. • They will able to answer the questions regarding water transport, absorption, mineral nutrition, photosynthesis, respiration and nitrogen metabolism. • The students will have better understanding of genetic engineering, PCR, genetic transformation and transgenic plants.
Paper : Economic Botany	<ul style="list-style-type: none"> • The students are expected to have better understanding of origin of agriculture.

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| | <ul style="list-style-type: none">• They will also be able to identify the plant sources of medicines, spices, oil, fibres, dyes, gum and timbers. |
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Course Outcomes of Zoology

Program Specific Outcomes (PSOs)

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<ul style="list-style-type: none"> • Students will gain knowledge to develop acquaintance of animal species around them and variations in their life cycles/biology and their interaction with the environment.
<ul style="list-style-type: none"> • Students will be also be apprised about likeness between the physiological processes at the cellular and organismic levels.
<ul style="list-style-type: none"> • Learner will be capable of using knowledge of subject and analytical methods in identifying and solving various complex situations of living forms and environment taking into consideration ethics and responsibilities.
<ul style="list-style-type: none"> • Students will be able to share and express their zoological knowledge of animal body, genetically diseases etc.

Semester-I	
Paper : Life and Diversity from Protozoa to Porifera and Cell Biology-I	<ul style="list-style-type: none"> • This paper helps in understanding the evolution of life from most primitive forms. • The study will also make the students reveal the dynamics and structural organization in the living cell along with the gratified principles by which the cell functions.
Paper : Life and Diversity from Coelentrata to Helminthes and Cell Biology-II	<ul style="list-style-type: none"> • This paper deals with the study of biodiversity and economic importance of coelenterates and helminthes. • It also emphasis upon the life history, mode of infection and pathogenesis of the helminth parasites. • The study also helps the students to learn deeper aspects of cell functioning.

Semester-II	
Paper : Life and Diversity from Annelida to Arthropoda and Genetics-I	<ul style="list-style-type: none"> • The study of annelids and arthropods reveals progressive evolutionary history and diversity of life forms. • Students will be able to understand the basic principles of genetics. • It also helps to create awareness about the extra chromosomal and cytoplasmic inheritance.
Paper : Life and Diversity from Mollusca to Hemichordata and Genetics-II	<ul style="list-style-type: none"> • It makes students to understand characteristic features and diversity of phylum mollusca, echinodermata and hemichordate. • It creates awareness about the comprehensive biology of chromosomes, functioning of genetic material and advanced techniques in the field of applied genetics.

Semester-III	
Paper : Life and Diversity of Chordates-I	<ul style="list-style-type: none"> • This paper is significant for understanding the diversity among protochordates, cyclostomes and pisces. • It also deals with the functioning of organ systems of various phyla.
Paper : Mammalian Physiology-I	<ul style="list-style-type: none"> • It will provide the students a basic appreciation of the underlying principles of physiological mechanisms. • It will help students in understanding of life processes.

Semester-IV	
Paper : Life and Diversity of Chordates-II	<ul style="list-style-type: none"> • The aim of this paper is to impart appropriate understanding of diversity among phylum amphibian, reptilia, aves and mammals. • It also focuses on the general characters and modifications among organisms belonging to different phylum.
Paper : Mammalian Physiology-II	<ul style="list-style-type: none"> • The study of mammalian physiology creates awareness regarding functioning of various physiological systems. • It helps in understanding the underlying mechanisms involved in circulation, respiration, excretion, neural integration, chemical integration of endocrinology and reproduction and how these systems may be integrated into whole animal physiology.

Semester-V	
Paper : Environmental Biology	<ul style="list-style-type: none"> • It exposes the students in understanding the environment around them. • Information provided will give an insight about the ecosystem, its services and its efficient management.
Paper : Evolution and Developmental Biology	<ul style="list-style-type: none"> • It aims to provide the students basic insights about the origin and progression of life on earth. • It helps students to understand the evolution of horse and man specifically.

Semester-VI

Paper : Aquaculture and Pest Management-I

- This will help to generate knowledge about the world fisheries and fishes of India.
- It imparts current and comprehensive information on the life cycle, nature of damage and control of pests of sugarcane, cotton, wheat, paddy and vegetables and thereby mitigating the economic and health damage caused by these pests.

Paper : Aquaculture and Pest Management-II

- The study of aquaculture and pest management would help in developing skilled personnel required for the aquaculture.
- This paper also helps to apprise the students about the stored grain pests and their efficient management with the help of biological and chemical agents.