

Name of the Department: BOTANY

Programme: UG

S.No.	Course Code	Course Name	Course Outcome
SEMESTER I			
1.	15 UBYC11	Algae & Bryophytes	<ul style="list-style-type: none">• Describe the essential features diversity of plant kingdom and their salient features• Provided a thorough knowledge about structure and life cycle pattern of algae and bryophytes.• Students get grasp of the economic importance of algae and bryophytes.• To study about the Characteristics and ecology of major groups of algae and bryophytes• Learn to the methods for sampling algae and bryophytes in the field observation• Assessed the environmental problems of algae and bryophytes
2.	15 UBYN 11	Plant World I	<ul style="list-style-type: none">• Create an interest on plant world to has science students• Providing the knowledge about the plants and its role on earth.• Improving the familiarize students on plant food production.• Assessed the native plants• Learning to the medicinal uses of wild plants• Studied the process of essential oil
SEMESTER II			

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1.	15UBYC21	Fungi, Lichens & Plant Pathology	<ul style="list-style-type: none"> • Improve the knowledge on fungi, lichens & plant pathology and their importance. • Providing the knowledge about the general aspects of plant diseases and their control. • Study that the structure, reproduction, culture, classifications, life-cycle of fungi, lichens and plant pathology. • Explain the ecological distribution, morphology and economic importance of Fungi and lichens • Describe the Function of lichens with significance of ectomycorrhiza and endomycorrhiza. • Distinguish the plant pathogenesis, classification and host-parasite interaction. Define plant diseases in crops and their management, significant contributions of plant pathologists and usage of various techniques in plant protection.
2.	15UBYN21	Plant World II	<ul style="list-style-type: none"> • Provide the knowledge based on various plant products the humanity depends on. • Explain the relation with plants and human life. • Define the student's dependence in man and plants. • Improve the traditional knowledge about the important medicinal plants. • Analyzed the processing methods of medicinal plants • Learning to the conservation and utilization of threatened plants
3.	15UBYE21	Horticulture	<ul style="list-style-type: none"> • Improved knowledge of various techniques in horticulture and gardening. • Explain the basic cultivation method of horticultural crops. • Describe the importance of horticultural crops and their propagation methods. • Define the types of gardens and their

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			<p>establishment.</p> <ul style="list-style-type: none"> • Learning to educate floriculture and fruit culture, green house and nursery management • Studied that the bonsai methods • To become an entrepreneur through the knowledge of horticultural techniques.
4.	15UBYC2P	Lab in Algae Fungi, Lichens, Bryophytes & Plant Pathology	<ul style="list-style-type: none"> • Explain to identify various forms of Algae • Describe the internal and reproduction structure of Bryophytes • Learning to the mounting techniques of various biological specimens • Improve the knowledge and skills in identifying the museum specimens • Define the various plant diseases. • Studied the various types of microbial techniques. • Learning to the pure culture technique
SEMESTER III			
1.	14 UBYC31	Pteridophytes, Gymnosperms and Paleobotany	<ul style="list-style-type: none"> • Understand the salient features of Pteridophytes, Gymnosperms and Paleobotany • Students learning to the importance of fossils and fossilization process in tracing evolution. • Provide a thorough knowledge about structure and life cycle pattern of Pteridophytes and Gymnosperms. • Explain the structure and reproduction of various genera mentioned in the syllabus. • Describe the Morphology and Anatomy characters of Pteridophyte and Gymnosperm • Understand the Reproduction and evolutionary trends in Pteridophytes and Gymnosperm. • Studied the structure and method of fossil formation.

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			<ul style="list-style-type: none"> • Learning to the geological era.
2.	15 UBYA31	Zoology I	<ul style="list-style-type: none"> • Understand the nature and control measures of malaria. • Knowledge on formation of Coral reefs and its applications. • Understand the morphology and other features of worm. • Knowledge on the life cycle of sea organisms. • Complete understanding on life cycle of invertebrates.
3.	14UBYV31	Mushroom Cultivation	<ul style="list-style-type: none"> • Provide the information about mushroom and their uses • Studied to be more familiar in mushroom cultivation • Understand the cultivation process of mushrooms. • Provide the knowledge about spawn preparation technique • Understand the various types mushroom diseases and control • Provide the Knowledge about processing of mushrooms. • To become a entrepreneur through the knowledge of mushroom cultivation
4.	14UBYS31	Herbal Botany	<ul style="list-style-type: none"> • Provide the knowledge about the importance of medicinal plants. • Studied to be more familiar in medicinal plants cultivation and conservation. • Learn to the making and process of medicinal plants. • Understand the systematic position, diagnostic feature and medicinal uses of selected plants. • Improved knowledge about different systems of medicinal plants (Siddha, Ayurveda and Unani) • Studied that the conservation methods of

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			medicinal plants.
SEMESTER IV			
1.	14UBYC41	Plant Anatomy & Embryology of Angiosperms	<ul style="list-style-type: none"> • Provide information about internal structure of stem, root and leaf. • Improve the knowledge about the general aspects of plant reproductive organs and embryo and its development. • Studied with a fundamental practices of plant embryology • Provide the knowledge about the various aspects of morphogenesis • Identifying the key aspects of embryology of Angiosperms • Understand the process of formation of male and female sexual representatives, • Studied the mechanism of fertilization in angiosperms. • Improve the knowledge embryo development and endosperms
2.	15UBYC4P	Lab in Pteridophytes, Gymnosperms, Anatomy and Embrology	<ul style="list-style-type: none"> • Helps to identify various forms of cryptogams • learn mounting techniques of various biological specimens • Enrich their knowledge and skills in identifying the museum specimens • Impart the knowledge about various developmental stages of plant reproduction • Students to be more familiar with Plant tissue culture. • Studied those morphological and anatomical cell structures of plants.
3.	14UBYA41	Zoology-II	<ul style="list-style-type: none"> • Complete understanding on life cycle of chordates. • Knowledge on flightless birds and its migration. • Understand the digestive, excretory and reproductive system of amphioxus.

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			<ul style="list-style-type: none"> • Understand the digestive, excretory and reproductive system of shark. • Knowledge on the adaptation of aquatic animals.
4.	14UBYA4P	Lab in Ancillary Zoology	<ul style="list-style-type: none"> • Ability to differentiate the microscopic spotters of various invertebrates. • Ability to differentiate the microscopic spotters of chordates. • Understand the dissemination of annelid. • Understand the dissemination of arthropoda. • Knowledge on differentiation various reptiles
5.	14UBYO41	Biochemistry	<ul style="list-style-type: none"> • Help students to know the fundamentals of biochemistry in relation to botany • Studied the structure of protein and lipids • Understand the structure of DNA and RNA • Know the mechanism of enzyme action • Understand the concept and laws of thermodynamics • Learning to the operating systems of instruments
SEMESTER V			
1.	14UBYC51	Taxonomy of Angiosperms	<ul style="list-style-type: none"> • Understand the morphological features of vegetative, inflorescence, fruits and seed characters. • Provide knowledge on botanical nomenclature, classifications, merits and demerits of various systems of classifications. • Understand the systematics positions of the selected families of the flowering plants with their economic importance. • Helps to have improved the knowledge on the economically important plants with their systematic treatment. • Provide the knowledge about the

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			<p>identification of plant species.</p> <ul style="list-style-type: none"> • Students to be familiar with local flora and herbarium techniques
2.	14UBYC52	Plant Physiology	<ul style="list-style-type: none"> • Provide a thorough knowledge about physiological fractions of Plants. • Understand the role of water and its relationship in plants • Gain knowledge on functions of various elements in plants • Provide an idea on biological synthesis of plant hormones, photosynthesis and respiration. • Understand the metabolic activities of plants • Students to have knowledge on structure, properties and significance of water - osmotic and non-osmotic uptake of water Relations. • Improve the knowledge of Photosynthesis and respiratory systems of plants.
3.	14UBYC53	Cell Biology	<ul style="list-style-type: none"> • Studied that about the structure and function of Cells. • Provide the knowledge on advances in cell biology. • Students to be studied about microscopy, cell organelles of Prokaryotic and Eukaryotic cells. • Understand gene regulation and chloroplast and mitochondria genome organization. • Helps to study the significance of mitosis and meiosis cell divisions • Understand about the cellular components • Gain knowledge about cell biology to selected examples of changes or losses in cell function
4.	14UBYC5P	Lab in Taxonomy of Angiosperms	<ul style="list-style-type: none"> • Helps to assign various plants to their respective families

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			<ul style="list-style-type: none"> • Understand the floral and morphological characters of various families • Helps to know the permanent herbarium preparation techniques • Improve the knowledge about the plant identification • Learn to the key preparations of families, Genus and species • Provide knowledge about ethnobotanical studies of in and around areas.
5.	14UBYC5Q	Lab in Plant Physiology and Cell Biology	<ul style="list-style-type: none"> • Explain to acquire the basic skills of Plant Physiology • Learning to the adaptive features of plant growing in various habitats • Describe the chromatographic techniques • Studied that about the cell division techniques. • Define photosynthesis respiration systems of plants • Gain thorough knowledge to observe the various cell organelles
6.	14UBYO51	Biodiversity and Conservation	<ul style="list-style-type: none"> • Provide a thorough knowledge on Plant diversity. • Helps to study the ecological adaptations of plants • Explain the concept of biodiversity and conservation strategies • Understand the importance of Biodiversity and Bioresources. • Studied about the biodiversity hotspots of the world and India • Learning to the conservation of threatened plants. •
7.	14UBYO52	Ethnobotany and Bioresources	<ul style="list-style-type: none"> • Provide a thorough knowledge of Ethanomedicinal plants. • Provide sufficient knowledge on Indigenous system of medicine.

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			<ul style="list-style-type: none"> • Understand the basic knowledge of Traditional system of medicine. • Documented the wild edible and medicinal plants species of the local areas • Studied the various types tribes and there life system. • Learning to the different western medicinal systems of India.
8.	15UBYS51	Biological Techniques and Biostatistics	<ul style="list-style-type: none"> • Learning to different types of microscopes and their uses of biological science laboratories. • Studied the methods mounding media and slide preparations • Explain the sectioning processors of the rotary microtome and their uses. • Understand the principle, Applications and different methods of chromatography. • Expose the students to the basic principles of different techniques. • Improve the knowledge of data collection and Biostatistics methods.
9.	15UBYS52	Forest Botany	<ul style="list-style-type: none"> • Help the students to understand the importance and value of forest and its products • Create awareness on conservation and sustainable utilization of forest and its resources. • Understand the ecological relationship, hydrological cycle and vegetation dynamics of forest. • Learn various ecosystems of forest • Understand the Keystone species of wild life <p>Helps to study various products of forest</p>
SEMESTER VI			
1.	15UBYC61	Plant Ecology and Phytogeography	<ul style="list-style-type: none"> • Provide a thorough knowledge about environmental biology and ecosystem.

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			<ul style="list-style-type: none"> • Provide sufficient knowledge on phytogeography. • Understand the Approaches to Phytogeography – Climate of India & its climatic zones • Gain an appreciation of Earth’s geological history and understand the role of historical biogeography in interpreting plant distributions • Gain knowledge about the environmental pollution and causes of pollutions • Investigate the relationship between systematic and biogeography (phylogeography) • Provide knowledge about Vegetation types
2.	15UBYC62	Genetics	<ul style="list-style-type: none"> • Study the principles and concept of Mendelian law • Gain knowledge about mutation and population genetics • Understand basic structure and function of DNA and chromosomes • Provide sufficient knowledge of hybridization and concepts of genetics • Understand the concept of genetic recombination’s at molecular level • Studied the origins of the human species
3.	15UBYC63	Microbiology	<ul style="list-style-type: none"> • Understand the basics knowledge of microbiology includes types of microbes, classification & characterization. • Studied the history of microbiology and its applications • Describe the classification of bacteria • Explain the different types of viruses and plant diseases • Provide the sufficient knowledge about the types of symptoms and their causative agents of diseases.

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			<ul style="list-style-type: none"> • Understand the diversity of microbes and importance of classification of microorganisms.
4.	14UBYC6P	Lab in Plant Ecology and Phytogeography And Genetics	<ul style="list-style-type: none"> • Studied the adaptive features of plant growing in various habitats • Understand the principals concept of biodiversity • Provide the sufficient knowledge about different vegetations of ecosystem • Helps to work out problems on Monohybrid and Dihybrid ratios • Learning to the cell division methods mitosis • Describe the transaction methods and species richness
5.	14UBYC6Q	Lab in Microbiology	<ul style="list-style-type: none"> • Demonstrate safe practices in a microbiology laboratory • Acquire the knowledge about basic skills in microbiology techniques • Helps to the students in culturing, identification and maintenance of microbes • Enrich their knowledge and skills in identifying the museum specimens • Understand and explain environmental factors that influence microbes • Studied the staining methods and slide preparations
6.	14UBYO61	Palynology and Pollination Biology	<ul style="list-style-type: none"> • Learning about Palynology. • Provide the knowledge on Pollination in plants. • Understand the sexual incompatibility in plants. • Students to be familiar with embryonic processes • Understand the various pollinations periods • Explain the seeds dispersal mode of

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			plants.
7.	14UBYO62	Economic Botany	<ul style="list-style-type: none"> • Learn economic uses of plants • Provide the knowledge on Economic importance of plants • Improve the knowledge of various plant cultivation techniques • Study developing a framework for exploring the economic uses of plants for food, beverages, textiles, medicine, shelter and fuel. • The course provides students with a general background in the basic principles of botany and plant ecology • Understand to the expand the human relationship with plants into the future.
8.	14UBYS61	Plant Biotechnology	<ul style="list-style-type: none"> • Provide a thorough knowledge on techniques of <i>in vitro</i> plant propagation • Understand the Plant Biotechnology techniques. • Provide the knowledge about embryogenesis. • Learning to the various gene transfer techniques • Helps to study the preservation methods
9.	14UBYV61	Bioinformatics	<ul style="list-style-type: none"> • Provide students with a practical and the theoretical knowledge of DNA sequences. • Study that protein sequences and protein structure of information • Understand the vast quantities of data generated in the fields of Molecular and Biological Sciences. • Explain the acquire problem-solving skills and gain experience biotechnology industries • Understanding, handling and developing important software used in pharmaceutical, chemical and biotechnology Techniques.

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