

K.L.E. Society's BASAVAPRABHU KORE ARTS, SCIENCE AND COMMERCE COLLEGE, CHIKODI – 591 201.

(Accredited at A+Grade With 3.42 CGPA in 4th Cycle

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Course outcome of the M.Sc. Botany courses

Semester: 1

Course Code: A011

Subject Paper title: Microbial Diversity

Course outcomes

- Knowledge on Landmark discoveries in Microbiology and different domains classification of living organisms.
- Familiarity with general characters of Prokaryotic and Eukaryotic microorganisms for conventional and molecular characterization using modern methods.
- Knowledge of cellular organization, life cycle and economic importance of prokaryotic (Eubacteria, Archaea, Cyanobacteria) and Eukaryotic (Fungi and protozoans).
- Knowledge of Varoius Culture techniques to study biodiversity of Culturable microbes.

Course Code: A021

Subject Paper title: Biodiversity and Conservation Biology

Course outcomes

- Important approaches and practices in biodiversity conservation and management.
- Analyze various threats to our biodiversity and able to suggest measures for conservation Strategies.
- Evaluating the importance of biological processes on conservation of biodiversity
- > Critical reading and understanding of scientific results in conservation biology

Course Code: A031

Subject Paper title: Systematic Botany of Angiosperms

Course outcomes

- Understand the diversity of Plants, Morphology, Identification, Nomenclature and their classification including recent advances in the field.
- Understand the role of interdisciplinary subjects in the field of Plant systematic
- Gain Knowledge of various Tools of Taxonomy.

Course Code: A041

Subject Paper title: Evolutionary Biology & Plant Geography

Course outcomes

- Acquire the Knowledge of Principles of Plant Geography
- Understand Patterns of biological variation and underlying processes responsible for these patterns.
- Understand Origin of life on earth and Process of Evolution
- Acquire the Knowledge of Plant distribution and Plant migration

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Semester: 2

Course Code: B011

Subject Paper title: Biochemistry and Bio-Physics

Course outcomes

- > Gain knowledge about various mechanisms such as proteins, their biosynthesis, folding into specific structures, post translational modifications and degradation mechanisms
- Learn about catalytic mechanistic of enzymes, its inhibitors and regulation
- Understand methods/procedures and different tools and techniques used in Biology

Course Code: B021

Subject Paper title: Developmental Biology

Course outcomes

- Analyze the progress achieved toward a molecular understanding of the reproductive processes in angiosperms.
- Understand morphological, cytological, and anatomical changes concerned with sporogenesis, gametogenesis, and fertilization.
- Understand the Histochemical nature of floral meristems.

Course Code: B031

Subject Paper title: Genetics and Plant Breeding

Course outcomes

- Facilitate the adequate knowledge about the cell biology and basic concept of genetics, structure of organisms and advanced molecular techniques.
- > Provide increased practical knowledge of plant breeding theories, chromosome techniques, crop improvement and its techniques and advanced molecular breeding technologies.
- > Gain practical knowledge of Techniques of Emasculation and hybridization for improving crop varieties.

Semester: 3

Course Code: C011

Subject Paper title: Plant Physiology

Course outcomes

- > Understanding of sensory physiology would help the students to understand the perception mechanism in plants.
- > Aquire knowledge of metabolic processes in plants and factors affecting these processes.
- Understand various secondary metabolites from plants and their roles for plant defense as well as human welfare.

Course Code:C021

Subject Paper title: Cell and Molecular Biology

Course outcomes

> Understand about the acellular entities including infective particles comprising only protein or RNA, which are parasites of plants which challenge the established dogmas, such as, cell being the basic unit of life or higher plants are multicellular rather than supracellular.



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Knowledge on various modes of programmed cell death, molecular biology of PCD and physiological changes that a cell undergoes during these processes.

Current state of knowledge about the plant cell structure and their turn over, starting from

cell wall to chromatin, in relation to their functions.

Learn Role of plant cytoskeleton and accessory proteins in major cellular processes of plants

Course Code: C031

Subject Paper title: Medicinal Plants and Herbal Drug Technology

Course outcomes

- Understand methods for recognition, collection and preservation of medicinal plants.
- > Student can analyze Secondary metabolites and dosage of active ingredients.

> Student can evaluate biological effects of medicinal plants.

Management tasks and professional activities in the areas of transformation of medicinal herbs, management of the quality of the processes, marketing of medicinal plants.

Semester: 4

Course Code: D011

Subject Paper title: Mycology and Plant Pathology

Course outcomes

Understand basic fungal biology, taxonomy of the fungi and major fungal lineages

➤ Gain skills necessary to isolate and handle fungi from nature, and to discern important microscopic characteristics of fungi.

> Learn about the biology of major, and emerging pathogens and pests of crop plants

Examine advantages and disadvantages of current control practices based on chemical ecology, genetics of plant resistance and breeding including transgenic approaches

Course Code: D021

Subject Paper title: Ecology and Environmental Biology

Course outcomes

Understand the basic principles of ecology, including population ecology, communityecology, and ecosystem function.

➤ Learn the interrelationships between land, sea, the atmosphere and the livingthings that occupy these environments.

> Evaluate current environmental issues and problems including the solutions and management practices that have been used or offered to address these issues and problems.

Course Code: D031

Subject Paper title: Plant Biotechnology

Course outcomes

- Understand the principles and techniques of plant tissue culture, concepts and methods associated with development and analysis of transgenic plants, and their applications in basic and applied research.
- Learn Concepts, tools and techniques related to in vitro propagation of plants.

Various case studies related to basic and applied research in plant sciences using transgenic technology.

Gain knowledge of uses and current research paradigms in various plants of economic value

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Course Code: D041

Subject Paper title: Research methodologies and Techniques in Botany

Course outcomes

- > Gain the knowledge of foundation of research, objectives, types and methodology of research
- > Students are able to learn analyze the data with statistical methods and interpretation

➤ Learn to use application of computer in Biology

> Study the various culture techniques and handling of tools and equipments required in research

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