

Department of Botany

Courses Outcomes:

- Students will access the basic fundamental knowledge about botany and their allied science branches.
- Students will be able to apply the scientific method for studying life sciences concern with plant science by observation, identification with external morphology and classification, by formulating hypotheses, collecting and analyzing data, interpretation of various plant groups including algae, fungi, bryophytes, lichens, pteridophytes, gymnosperms, and angiosperms etc.
- Students will be able to access the primary information, different reviews, references both from internet and books, to specify the relevant works for particular topics in subject of botany as curriculum given by Shivaji University, Kolhapur for under graduate studies.
- Students will be able to identify the major groups of plants with a phylogenetic framework. Students will be able to compare and contrast the characteristics of plants, algae, fungi, lichens, pteridophytes, gymnosperms, and angiosperms that differentiate them from each other and from other forms of life cycles.
- Students will be able to use the evidence of comparative account on various plant groups to justify the theory of evolution, offers the only scientific reasons for the diversity of life on earth.
- Students will be able to explain how organisms function at the level of the gene, genome, cell, tissue, organ and organ-system.
- Students will be able to explain the ecological interconnections among different life forms existing on earth by cycling materials and energy flow through the environment, populations, communities, and ecosystems.
- Students will be able to demonstrate experimental techniques proficiency for quantification and qualitative analysis methods for accessing bio processes.

Program Outcomes:

- The student will demonstrate and learn a good knowledge base in basic principles of plant cells and tissues, plant organs, plant physiology, plant reproduction, diversity and plant ecology.
- The student will fluently and coherently explain scientific information in oral and written form by examines plants using observational tools, scientific techniques and empirical analysis.
- The student will be able to carry out experiments to collect data, examine hypotheses, and finding based on data for answering biological questions.
- Students will communicate results of data from field and laboratory works within diverse multidisciplinary themes in typical scientific format like tables and graphs.
- It develops the team work skill in students to solve incoming challenges to prepare themselves for future career and educational goals in plant sciences.

Program Specific Outcomes:

The B.Sc botany program enabled students to know

- ✓ the earlier plants, their vegetative and reproductive structures and their importance.
- ✓ the beneficial and harmful fungi, bacteria, mycoplasma, their diseases and control measures.
- ✓ importance of crops, varieties and their cultivation in the field of agriculture for betterment.
- ✓ the importance of plants in medicinal plants, identification, doses compensations.
- ✓ environment influence on different the life forms and vice versa.
- ✓ basis of angiosperm identifications, observations of floral characters for classification and features of few basic families of flowering plants from local areas.
- ✓ the different rules governing the Intellectual Property Rights.
- ✓ art and science underlying the mushroom production techniques.

- ✓ the important biological life processes, biochemical cycles, enzymological reactions, uptake mechanism of nutrients in plants.
- ✓ art and scientific skills in Plant Breeding, different methods in crop field.
- ✓ the application of various technological advances to understand and use in plant science.
- ✓ the different methods, protocols and procedures applicable in botanical research.
- ✓ principles of statistics applied to the field of biology.

The B.Sc. botany completed students applying for post graduate studies and research. The students occupies the various posts in public, private and governmental sectors such as horticultural officers, forest officer, plant officer, nursery manager, landscape developer, agricultural officer, agricultural scientist. The program involved directly in society academia for its upliftment by providing good biology and environment teachers and naturalist. Like other revolutionist, the botany students have potentiality to conserve and maintain environment for eco friendly liveliness.