

Programme Outcome (PO):

The undergraduate (UG) course offered by the Department of Botany, Ramakrishna Mission Vivekananda Centenary College, Rahara, strictly follows the CBCS syllabus prescribed by the UGC. The course is a combination of general and specialized education, simultaneously introducing the concepts of breadth and depth in learning. The fundamental aim of UG course is to produce competent plant biologists who can employ and implement their gained knowledge in basic and applied aspects that will profoundly influence the prevailing paradigm of agriculture, industry, healthcare and environment to provide sustainable development. The present curriculum will not only advance their knowledge and understanding of the subject, but will also increase the ability of critical thinking, development of scientific attitude, handling of problems and generating solution, improve practical skills, enhance communication skill, social interaction, increase awareness in environment related issues and recognize the ethical value system. Additionally the training provided to the students will make them competent enough for doing jobs in Govt. and private sectors of academia, research and industry. Last and not the least to prepare the students for lifelong learning by drawing attention to the vast world of knowledge of plants and introducing them to the methodology of systematic academic enquiry.

Programme Specific Outcomes (PSO):

The UG curriculum caters an all-round development of the student, rolling out globally ready individuals into the fast pacing world. The programme specific outcome includes:

- Understanding the nature and basic concepts of all the plant groups, their metabolism, components at the molecular level, biochemistry, taxonomy and ecology.
- The course will make them aware of natural resources and environment and the importance of conserving it.
- Hands on training in various fields will develop practical skills, handling equipments and laboratory use along with collection and interpretation of biological materials and data.
- Knowledge gained through theoretical and lab based experiments will generate technical personnel in various priority areas such as genetics, cell and molecular biology, plant systematics and biotechnology.

Course Outcome (CO)	
Microbiology and Algae	On completion of the course, students will be able to: <ul style="list-style-type: none">• Understand the diversity among Bacteria, Viruses and Algae.• Know their morphology, systematics and biology.• Understand their life cycle patterns.• Understand their economic importance.
Fungi, Lichens and Plant Pathology	On completion of the course, students will be able to: <ul style="list-style-type: none">• Understand the biodiversity of Fungi, lichens and plant pathogens.• Know the economic importance of fungi, lichens and plant pathogens.• Understand the scope and importance of Plant Pathology• Know the etiology and control measures of plant diseases.

Archegoniatae	<p>On completion of the course, students will be able to:</p> <ul style="list-style-type: none"> • Know the salient features of Cryptogams plants. • Know the status of cryptogams as a group in plant kingdom. • Understand the life cycles of selected genera. • Learn about the economic and ecological importance.
Angiosperm Taxonomy	<p>On completion of the course, students will be able to:</p> <ul style="list-style-type: none"> • Understand the status of angiosperms in plant kingdom • Realize the origin of angiosperms • Study various systems of classification. • Understand various angiosperm families emphasizing their morphology, distinctive features and biology. • Know their economic importance.
Plant Ecology and Phytogeography	<p>On completion of the course, students will be able to:</p> <ul style="list-style-type: none"> • Understand plant communities and ecological adaptations in plants Learn about biodiversity and its conservation • Study botanical regions of India and different vegetation types. • Understand bioremediation, global warming and climate change.
Anatomy and Embryology	<p>On completion of the course, students will be able to:</p> <ul style="list-style-type: none"> • Understand the scope & importance of Anatomy. • Know various types of tissue systems. • Understand normal and anomalous secondary growth in plants. • Understand structure and development of plant reproductive organs • Understand microsporogenesis and megasporogenesis and development of male and female gametophytes. • Know the process of fertilization, endosperm and embryogeny.
Biomolecules and Biochemistry	<p>On completion of the course, students will be able to:</p> <ul style="list-style-type: none"> • Understand the different types of biomolecules and its importance. • Realize the industrial application of Biochemistry.
Economic Botany	<p>On completion of the course, students will be able to:</p> <ul style="list-style-type: none"> • Understand the role plants in human welfare. • Gain knowledge about various plants of economic use • Know importance of plants & plant products • Understand the chemical contents of the plant products • Know about the utility of plant resources
Plant Physiology	<p>On completion of the course, students will be able to:</p> <ul style="list-style-type: none"> • Understand the plants and plant cells in relation to water. • Understand the process of photosynthesis in higher plants • Understand the respiration in higher plants • Learn about the movement of sap and absorption, translocation of water and food. • Understand the plant movements.
Genetics, Cell and Molecular Biology	<p>On completion of the course, students will be able to:</p> <ul style="list-style-type: none"> • Gain knowledge about "Cell Science". • Understand Cell wall, Cell membrane, organelles and cell division. • Learn the scope and importance of molecular biology. • Understand the nature of biomolecules, their role in living systems. • Understand the process of central dogma.

Biotechnology	<p>On completion of the course, students will be able to:</p> <ul style="list-style-type: none"> • Understand current status and future of biotechnology in India. • Gain knowledge of different instruments related to biotechnology. • Understand the importance of interdisciplinary and industrial approaches of Biotechnology. • Recognize impact of biotechnology on socioeconomic aspects of life. • Develop the skills for employment or entrepreneurship.
Laboratory and Field based experiments	<p>On completion of the course, students will be able to:</p> <ul style="list-style-type: none"> • Understand the morphological diversity of different plant forms. • Observe vegetative and reproductive parts of various plant forms. • Detect chemical contents in various plant products of economic use. • Acquire knowledge on chromosomes, Isolation of nucleic acids etc. • Know botanical source, characteristics and utilities of plant products. • Learn about the industrial applications of various plants and plant products. • Understand the floristic composition of different phyto-geographical regions.