

**JAMSHEDPUR CO-OPERATIVE COLLEGE, JAMSHEDPUR**

**Department of Botany**

**B.Sc Programme Outcome**

Jamshedpur Co-Operative college offers full time three-year B.Sc Programme in Botany. The three year Undergraduate programme consists of six semesters. Today plant science is a fusion of the traditional components with the modern aspects of biochemistry, molecular biology and biotechnology. Keeping these advancements in view, the syllabus is carefully-crafted that introduce a wide range of topics to students like plant diversity, physiology, biochemistry, molecular biology, reproduction, anatomy, taxonomy, ecology, economic botany and the impact of the environment on the growth and development of plants. All these aspects have been given due weightage over the six semesters. . It is believed that a student graduating in Botany with the new CBCS curriculum will be a complete botanist at Honours level.

**Programme Outcome**

On completion of the course, students are able to Understand

- ❖ Students will be able to identify the major groups of organisms with an emphasis on plants and be able to classify them within a phylogenetic framework. Students will be able to compare and contrast the characteristics of plants, algae, and fungi that differentiate them from each other and from other forms of life.
- ❖ Students will be able to explicate the ecological interconnectedness of life on earth by tracing energy and nutrient flows through the environment. They will be able to relate the physical features of the environment to the structure of populations, communities, and ecosystems.
- ❖ The student will be able to understand the genomic organization of living organisms, genes, chromosome etc. Students will be able to explain how organisms function at the level of the gene, genome, cell, tissue, organ and organ-system. Drawing upon this knowledge, they will be able to give specific examples of the physiological adaptations, development, reproduction and behavior of different forms of life.
- ❖ The fundamentals of Recombinant DNA Technology, Know about the Genetic Engineering and Understand the principle and basic protocols for Plant Tissue Culture.
- ❖ Students develop laboratory skills throughout the curriculum via hands-on experiences with diverse experimental techniques and tools.