

JAMSHEDPUR CO-OPERATIVE COLLEGE, JAMSHEDPUR

Department of Botany

M.Sc Programme Outcome

Jamshedpur Co-Operative College Offers two years full time Post graduation Programme in Botany with the specialization in Microbiology & Plant Pathology. The course consists of four semester. Over the years, Botany has shown enormous gain in information and applications owing to tremendous inputs from research in all its aspects. The students taking admission to these programs of M.Sc. are expected to get equipped with the ability of explaining the basic scientific principles and methods, inculcating scientific thinking and awareness among the student thereby creating in them an ability to handle the unexpected situations of life in a better way. The following is a specification of the key Programme Outcomes (knowledge, skills, values and attitude) that highlight important areas in which the students are expected to gain proficiency at the end of the tenure of their postgraduate program.

- ❖ Students will be able to use the evidence of comparative biology to explain how the theory of evolution offers the only scientific explanation for the unity and diversity of life on earth.
- ❖ This fundamental paper discusses the importance of microorganisms, the course throws light on types of microorganisms in and around humans, at the end of the course, the student has understanding on the metabolism and mechanism of microbial life.
- ❖ Know the cultivation methods of bacteria, yeast, fungi and virus and Understand the Microbial Genetics and Recombination in Bacteria. Understand the scope and importance of Plant Pathology.
- ❖ Understand the concept, principle and types of sterilization methods, Know the concept and characteristics of antiseptic, disinfectant and their mode of action.
- ❖ Principle, working and applications of instruments like pH meters, spectrophotometer, centrifuge, Ocular micrometer, and laminar air flow.
- ❖ Know the prevention and control measures of plant diseases and its effect on economy of crops.
- ❖ Students will be able to apply the scientific method to questions in biology by formulating testable hypotheses, gathering data that address these hypotheses, and analyzing those data to assess the degree to which their scientific work supports their hypotheses.
- ❖ They learn several approaches to data analysis and become confident in using computational methods to analyze and solve various problems. Although the student's long term goals are quite varied, these courses help in drawing many to careers that demand scientific and technical knowledge and strong logical reasoning abilities.