

Programme Outcomes (POs) – M.Sc. Microbiology

Upon successful completion of the programme, students will be able to:

PO1 –

Demonstrate advanced understanding of microbial diversity, molecular biology, microbial physiology, biochemistry, toxicology, genomics, and proteomics.

PO2 – Design, perform, analyze, and interpret complex microbiological experiments, applying principles of molecular biology, genetic engineering, and biostatistics.

PO3 – Operate advanced laboratory instruments (PCR, gel documentation, HPLC, spectrophotometers, fermenters, bioinformatics tools, sequencing databases) with efficiency and accuracy.

PO4 – Apply cutting-edge technologies such as CRISPR, recombinant DNA techniques, omics platforms, nano-microbiology tools, and microbial biotechnology in solving real-world problems.

PO5 – Demonstrate understanding of industrial microbiology, fermentation technology, microbial product development, and diagnostic microbiology used in healthcare and biotechnology industries.

PO6 – Analyze genomic and proteomic datasets using computational tools, develop proficiency in sequence analysis, phylogenetics, and computational modeling of microbial systems.

PO7 – Follow laboratory biosafety guidelines, ethical norms, environmental responsibility, and regulatory frameworks (GLP, GMP, biosafety levels).