

### **Program Outcomes: Integrated M.Sc.**

PO1: Demonstrate a comprehensive understanding of fundamental principles and concepts in basic sciences.

PO2: Analyse, evaluate, and synthesize complex scientific information and data using appropriate methods and techniques.

PO3: Apply scientific reasoning and critical thinking adeptly to recognize, assess, and resolve problems encountered in various scientific contexts.

PO4: Utilize computational power, programming languages, and modern technologies proficiently to address scientific challenges, effectively integrating technological solutions into problem-solving processes.

PO5: Communicate scientific information effectively and demonstrate proficiency in the use of modern scientific tools and technologies for experimentation, data collection, analysis, and interpretation.

PO6: Adhere to ethical principles and practices in the conduct of scientific research and professional activities, and work collaboratively with others.

PO7: Engage in lifelong learning and professional development to enhance the knowledge and skills in basic sciences.

### **Program-Specific Outcomes (PSOs)**

After the successful completion of the Biology program, the students are expected to

PSO1. Demonstrate an in-depth understanding of fundamental principles that underlie the field of Biology (Animal Science, Plant Science, Microbiology, Biochemistry, Molecular and Cell Biology, Genetics and Genetic Engineering, Immunology, Biotechnology, Computational Biology and Research Methodology).

PSO2. Implement the concept of science and technology to foster the traditional and modern techniques for solving the complex problems in any branches of biology.

PSO3. Show proficiency in performing various basic and advanced laboratory techniques employed in Biology in academia and industries.

PSO4. Design and conduct biological experiments, analyse and interpret experimental data and perform troubleshooting if necessary.

PSO5. Identify a research problem using literature survey, formulate hypothesis, develop a research plan, execute the research plan, write the project report and communicate effectively through written, oral and visual methods.

PSO6. Develop analytical thinking and problem-solving abilities, enabling them to gain skilful jobs in industries and research labs.

PSO7. Develop high thinking and entrepreneurship skills of various ventures in Biology using plant /animal/microbial resources, biological techniques and marketing of bioproducts.

PSO8. Communicate effectively, work in teams and lead in academic and non-academic institutions.