

Department of Microbiology

**PROGRAMME SPECIFIC OUTCOMES (PSOs)**

<b>After successful completion of 3-Year: <u>Generic Elective Microbiology course</u> a student should be able to achieve the following:</b>	
<b>PSO1</b>	<b>Knowledge of Microbiology and contemporary integrated Subjects spanning its various aspects:</b> Students learn to appreciate and gain logical insight for application into various aspects spanning from basic Bacteriology, Biochemistry, Immunology, Medical Microbiology, Environmental Ecology and Microbes, Biophysics, Cell Biology, Molecular Biology, Genetics, Systems Biology, Fermentation Technology, Recombinant DNA Technology, Food and Dairy, Environmental Microbiology so on to mention a few.
<b>PSO2</b>	<b>Development Perspectives with emphasis on Microbial Instrumentation Techniques:</b> Students learn in details aspects of good laboratory practices with respect to all the four Bio-safety levels applicable. They gain a detailed theoretical/hands-on skill on state of the art instrumentations applicable in the field of advance biology.
<b>PSO3</b>	<b>Mathematical and Statistical tools in Microbiological Application:</b> Students are trained to use mathematical calculations and graphical methods for quantitative reasoning towards solving problems in Microbiology. Use of basic statistical tools are a regular part of their practical work which enables them to analyse their experimental outcomes.
<b>PSO4</b>	<b>Research Aptitude:</b> Students gain the ability to independently hypothesise problems, critically approach to solve it by appropriate experimental designs, prepare, execute the experiments, score and analyse the outcomes.
<b>PSO5</b>	<b>Socio-Environmental Awareness:</b> Students learn the crucial role of microbes towards maintaining a clean and healthy environment. They will gain knowledge of how microbes affect human, animal, plant health and disease and thereby stand capable to approach for solutions of environmental issues or sustainable development
<b>PSO6</b>	<b>Higher Education &amp; Employability:</b> Students develop the capacity for independent, lifelong learning in the context of socio-technical transformations. By gaining skills of independently understand, approach and take informed actions in the field students will find career options in public and global health, scientific writing, environmental organisations, the food, pharmaceutical, and biotechnology industries, as well as biological and medical research in higher education institutions.

