

## M.Sc. Microbiology

Program Outcome	<p>PO1 : Master of Science in Microbiology is designed to develop students for academic and industrial excellence. The course includes emphasizes the applications of microbiology to address environmental problems and provide microbial remedial easures. The outcome of the study is the usage of knowledge in developing a sustainable environment. The major areas focussed in the course is microbial diversity, environmental microbiology, molecular biology and genetic engineering, Biophysical techniques and instrumentations, enzyme kinetics, microbial ecology and physiological adaptations, molecular pathogenesis, immunology and immunological techniques, fermentation technology, bioprocess engineering, pharmaceutical microbiology, microbial products and the applied subjects for the better understanding of the applications of microbiology.</p> <p>PO2 : Students shall be enabled to distinguish, differentiate, identify and classify various types of microorganisms. They shall be able to use various bioanalytical instrumentations and techniques to study various aspects of microbiology. The course shall develop capacitance to address environmental problems with microbial solutions. Students shall gain an understanding of the molecular pathogenesis of infectious diseases and advances in immunology. The study of fermentation technology and pharmaceutical microbiology shall prepare the students for the various industries in South Gujarat region. The study of microbial products and the knowledge of industrial microbiology as well as microbial technology shall enable the students to envision themselves as bio entrepreneurs.</p> <p>PO3 : Students shall develop aptitude for research, learn to formulate hypothesis and design experiments to test the hypothesis. The research accomplished in their dissertations shall make them understand the relevance of microbiology in addressing the environmental problems and finding out microbial solutions and maintaining sustainable environment. Students shall be inclined towards research and shall learn to pursue and formulate plan of work to achieve the set objectives.</p>
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