

**Industrial Biotechnology Training**  
**Medical Microbiology (Standard)**  
**Session 2021 - 2022**

<b>Module Content</b>
Introductory Lecture
Introduction to Good Laboratory Practices and Instrumentation Handling of Specimens and Biomedical Waste Disposal Introduction to Normal Flora of Human Body
Culture Media <ul style="list-style-type: none"> <li>• Types of Culture Media</li> <li>• Preparation of Culture Media</li> </ul>
Isolation of Pathogenic Bacteria from Clinical Samples <ul style="list-style-type: none"> <li>• Serial Dilution Method</li> <li>• Spread Plate Method</li> <li>• Pour Plate Method</li> <li>• Streak Plate Method</li> </ul>
Morphological Characterization of Microorganisms <ul style="list-style-type: none"> <li>• Colony Characterization</li> <li>• Colony Forming Unit (CFU) Count</li> </ul>
Microscopic Characterization of Microorganisms <ul style="list-style-type: none"> <li>• Differential Staining <ul style="list-style-type: none"> <li>○ Gram's Staining</li> <li>○ Acid Fast Bacilli (AFB) Staining</li> <li>○ Endospore Staining</li> </ul> </li> <li>• Negative Staining <ul style="list-style-type: none"> <li>○ Capsule Staining</li> </ul> </li> </ul>
Biochemical Characterization for Bacterial Identification <ul style="list-style-type: none"> <li>• IMViC Test</li> <li>• Oxidase Test</li> <li>• Catalase Test</li> </ul>
Isolation and Identification of Fungi
Antibiotic Susceptibility Tests <ul style="list-style-type: none"> <li>• Disc Diffusion Test</li> </ul>
Enumeration of Bacteria: Growth Kinetic Study
Presentation, Report Submission and Viva-Voce