

**Industrial Biotechnology Training**  
**Environmental Biotechnology (Specialized)**  
**Session 2021 - 2022**

<b>Module Content</b>
Orientation Program, General Introduction to environmental biotechnology
Lab Visit: Proper Demonstration of Instruments and Good Laboratory Practices
Preparation of Buffers and Reagents and Introduction to lab mathematics
Determination Procedure of Physical Parameter of water quality testing by HANNA EDGE <ul style="list-style-type: none"> <li>• pH</li> <li>• temperature</li> <li>• Electrical conductivity</li> <li>• TDS</li> <li>• DO</li> <li>• Salinity</li> </ul>
Determination Procedure of Chemical Parameter of water quality testing <ul style="list-style-type: none"> <li>• Determination of acidity</li> <li>• Determination of alkalinity</li> <li>• Estimation of the hardness</li> <li>• Determination of the dissolved oxygen (Manual Method)</li> </ul>
Determination Procedure of wastewater quality parameter <ul style="list-style-type: none"> <li>• Determination of total, suspended, dissolved solids</li> <li>• Estimation of Nitrates Nitrogen</li> <li>• Determination of Ammonical Nitrogen</li> <li>• Determination of Biochemical oxygen demand</li> <li>• Determination of Chemical oxygen demand</li> <li>• Determination of Total phosphate</li> <li>• Determination of Sulphate</li> </ul>
<ul style="list-style-type: none"> <li>• Enumeration of microbial index by standard plate count method (SPC)</li> </ul>
Microbiological techniques (Environmental Microbiology) <ul style="list-style-type: none"> <li>• Plating methods</li> <li>• Streaking methods</li> <li>• Staining methods</li> </ul>
<ul style="list-style-type: none"> <li>• Enumeration of Total coliforms by Multiple tube Fermentation test (MPN)</li> </ul>
<ul style="list-style-type: none"> <li>• Exercise based on Bioremediation of Industrial effluent</li> </ul>
<ul style="list-style-type: none"> <li>• Visit of Industrial tour – Saras Dairy</li> <li>• Visit of Vermifiltration Plant- BIBT Campus</li> </ul>
Report Writing, final monitoring by Quiz/ Viva/ Presentation