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Learning Outcomes	Applying the understanding of the microbial diversity, community structure and role of biogeochemical cycling of nutrients, for bioremediation and sustainable development.	

Programme: M.Sc. (Microbiology)
Course Code: MIPE-401
Title of the Course: ENVIRONMENTAL MICROBIOLOGY AND BIOREMEDIATION [P]
Number of Credits: 1, Practical
Contact hours: 30
Effective from Academic Year: 2022-23

Prerequisites	It is assumed that the students have a basic knowledge of environmental pollution and microbiology.	
Objective:	To familiarize with the techniques of waste water analysis, biodegradation of aromatic pollutants and bioremediation of metal/metalloid pollutants.	
Content:		**(30)**
1.	Analysis of water samples for COD, BOD and microbial load.	
2.	Isolation of hydrocarbon degrading microorganism (degradation of sodium benzoate/Naphthalene).	
3.	Isolation of biosurfactant producing microorganisms.	
4.	BATH assay for microbial adherence.	
5.	Isolation of selenite/tellurite resistant microorganisms for application in bioremediation.	
Pedagogy:	Hands-on experiments in the laboratory, video, online data	
References/ Readings	As given under Theory Course MITE-401	
Learning Outcomes	1. Able to perform waste water analysis; biodegradation of aromatic pollutants 2. Able to demonstrate the role of microorganisms in bioremediation.	