

Subject Code: 2SC2020306	Subject Title: Microbiology Practical
COURSE TYPE: CORE COURSE	

Course Objective:

Teaching scheme (hours) per week		Credit			Theory Marks		Practical Marks		Total
Theory	Practical	Theory	Practical	Total	Uni. Assessment	Cont. Assessment	Uni. Assessment	Cont. Assessment	
	8		8	8			120	80	200

1. Sampling of water and wastewater sample
2. Analysis of physical parameters: TS, TDS, TSS, TVS, Colour, Turbidity, pH,
3. Determination of Acidity and Alkalinity
4. Determination of DO
5. Determination of COD
6. Determination of BOD
7. Determination of Total-N
8. Determination of PO-4P.
9. Determination of Chloride
10. Determination of Sulfate.
11. Determination of Ca-Mg-hardness
12. Bacteriological analysis by MPN technique (Analysis of drinking water by MTT and MFT)
13. Bioremediation of inorganic pollutants and phytoremediation of metals
14. DNA extraction from Soil.
15. DNA extraction from water.
16. Library creation from metagenome.
17. Isolation of m RNA.
18. Study of genome database and tools
19. Study of Metagenomics database and tools
20. Study of proteomics database and tools
21. Sterility test of pharmaceutical product
22. Isolation of Amylase producing Microorganisms
23. Isolation of Protease Producing Microorganisms
24. Isolation of organic acid producer
25. Production of organic acid/enzyme by SSF.
26. Fermentative Production of Amylase & its Activity Check
27. Fermentative Production of Ethanol/Alcohol
28. Production of SCP
29. Determination of Oxygen Transfer rate (OTR)
30. Penicillin Bioassay
31. Standard Plate Count (SPC).
32. Study of Air flora.