

19CE3452- ENVIRONMENTAL ENGINEERING LAB

Course Category:	Program Core	Credits:	1.5
Course Type:	Laboratory	Lecture-Tutorial-Practical:	0-0-3
Prerequisites:	19CE3402- Environmental Engineering 19BS1102- Chemistry of Materials	Continuous Evaluation:	25
		Semester End Evaluation:	50
		Total Marks:	75

Course Outcomes

Upon successful completion of the course, the student will be able to:

CO1	Conduct the experimental testing of pH, turbidity, conductivity and alkalinity or acidity tests and understand their significance and application	K3
CO2	Conduct the experimental testing of chlorides, total organic, inorganic solids and iron tests in water and understand their significance and application	K3
CO3	Conduct the experimental testing of dissolved oxygen, nitrogen and phosphorous tests in water and understand their significance and application	K3
CO4	Conduct various waste water quality parameters-BOD & COD and understand their significance and application.	K3
CO5	Conduct Presumptive coli form test.	K3

Contribution of Course Outcomes towards achievement of Program Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1				3	3				2				2	2
CO2				3	3				2				2	2
CO3				3	3				2				2	2
CO4				3	3				2				2	2
Avg.				3	3				2				2	2

1- Low

2-Medium

3-High

Course Content

Experiment No.1	Determination of pH and Turbidity.	CO1
Experiment No.2	Determination of Conductivity and Total dissolved solids	
Experiment No.3	Determination of Alkalinity/Acidity	
Experiment No.4	Determination of Chlorides	CO2
Experiment No.5	Determination and Estimation of total solids, organic solids and inorganic solids	
Experiment No.6	Determination of iron.	
Experiment No.7	Determination of Dissolved Oxygen.	CO3
Experiment No.8	Determination of Nitrogen	
Experiment No.9	Determination of total Phosphorous	
Experiment No.10	Determination of B.O. D	CO4
Experiment No.11	Determination of C.O. D	
Experiment No.12	Determination of Optimum coagulant dose	
Experiment No.13	Determination of Chlorine demand	CO5
Experiment No.14	Presumptive coli form test	

Learning Resources

Text Books & Reference Manuals	<ol style="list-style-type: none"> Chemistry for Environmental Engineering by (4th edition) by Sawyer and Mc. Carty, McGraw - Hill International Book Company, 1994. IS codes (testing) & (standard values) for water Standard Methods for Analysis of water and Waste Water – APHA
e-Resources & other digital material	<ol style="list-style-type: none"> NME-ICT, MHRD, NITTTR Chennai