

LESSON PLAN

Semester: 4th		Year: 2nd Year	Course: B.Tech
Branch : CE		Sub: Water Supply & Sanitary Engineering	Total Credit:03
		Sub Code : CIPC2007	
Name of the Faculty:		Mr. Manoranjan Dash	
Designation :		Assistant Professor	
Department :		Civil Engineering	
Session		2024-25	
Recommended Books		Text book:	
		1-Environmental Engineering (Volume I & II) by S. K. Garg-Khanna Publishers	
		2- Environmental Engineering (Volume I &II) by B. C. Punmia-Khanna Publishers	
		Reference Books:	
		1-Environmental Engineering by H. S. Peavy, D.R. Rowe and G. Tchobanoglous, MGH	
Sl. No.	Lecture No.	Topics to be covered	No. of Classes
MODULE-1			
1	Lecture-01	Quantity of water: Sources of water.	8
2	Lecture-02	Per capita demand, design period	
3	Lecture-03	population forecast, fluctuation in demand	
4	Lecture-04	General requirement for water supply	
5	Lecture-05	Types of intakes	
6	Lecture-06	Pumping and Transportation of water.	
7	Lecture-07	: Physical, chemical and biological characteristics of water and their significance	
8	Lecture-08	necessity of treatment, Drinking water standards	
MODULE-2			
9	Lecture-09	Basic unit operations and unit processes for surface water treatment	6
10	Lecture-10	Screening, Plain Sedimentation,	
11	Lecture-11	Sedimentation aided with Coagulation	
12	Lecture-12	Filtration, Disinfection, Softening Miscellaneous treatments (principles only)	
13	Lecture-13	Removal of colours, tastes and odours removal of iron and manganese,	
14	Lecture-14	fluoridation and defloridation, Ion exchange, electro-dialysis, RO	
MODULE-3			
15	Lecture-15	Quantity and characteristics of wastewater, effluent discharge standards.	6
16	Lecture-16	Domestic wastewater treatment: Primary treatment, Screening, Grit removal, Sedimentation,	
17	Lecture-17	Secondary treatment: Basis of microbiology, Growth and food utilization	

18	Lecture-18	Suspended-culture systems, Attached-culture systems,	
19	Lecture-19	Secondary clarification, Disinfections of effluents.	
20	Lecture-20	Sludge treatment and disposal: Sludge characteristics, thickening, disposal	
MODULE-4			
21	Lecture-21	Solid waste management: Source	7
22	Lecture-22	classification, characteristics	
23	Lecture-23	generation, collection, Storage and transport of MSW	
24	Lecture-24	MSW management, Waste minimization of MSW	
25	Lecture-25	Reuse and recycling,	
26	Lecture-26	Biological & thermal treatment (principles only)	
27	Lecture-27	Land Fill	

of Faculty Member

Signature of HOD

PRINCIPAL