

Department of Civil Engg.
Govt. Polytechnic for Women Rehan
Distt. – Kangra (H.P.) – 176022



LESSON PLAN

Program Name	Civil Engineering
Subject Name	Public Health Engg
Subject Code	CEPC302
Semester	6 th
Subject Teacher Name	Amit Thakur

Evaluation Scheme

Sr. No.	Subject Name	Study scheme (Hrs/Week)		Marks in Evaluation Scheme					
				Internal Assessment			External Assessment		
		Th	Pr	Th	Pr	Total	Th	Pr	Total
1.	Public Health Engg	3	-	40	-	40	60	60	60
Reference Books		1 Garg, S.K., Environmental Engineering Vol. I and Vol. II, Khanna Publishers 2 Sharma S.C, Environmental Engineering, Khanna Publishing House, New Delhi 3 J. S. Water Supply and Sanitary Engineering, Dhanpat Ra 4 Punmia, B C, Environmental Engineering, vol. I and II, Laxmi Publishers							

Course Outcomes (COs)

CO – 1	Know the procedure to identify the sources of surface and subsurface water
CO – 2	Estimate the quantity of drinking water required for a population•
CO – 3	Draw labeled layout for water supply scheme.
CO – 4	Device suitable water treatment technique.
CO – 5	Evaluate the characteristics and suggest treatment of sewage

Unit-I	Name of Topic	Proposed Date	Actual Date	Remarks	
Sources, Demand and Quality of water	Water supply schemes - Objectives, components	28/01/2026 31/01/2026			
	Sources of water: Surface and Subsurface sources of water, Intake Structures,	02/02/2026 04/02/2026			
	Definition and types, Factors governing the location of an intake structure, Types of intakes	07/02/2026 09/02/2026			
	Demand of water: Factors affecting rate of demand, Variations of water demands	11/02/2026 16/02/2026			
	forecasting of population, Methods of forecasting of population, (Simple problems on forecasting of population)	18/02/2026 21/02/2026			
	Design period, estimating of quantity of water supply required for city or town	23/02/2026			
	Unit-II Purification of water	Purification of Water: Objectives of water treatment, Aeration-objects and methods of aeration	25/08/2026		
		Plain sedimentation, Sedimentation with coagulation	28/02/2026		
principles of coagulation, types of coagulants, Jar Test, process of coagulation.		02/03/2026			
Filtration - mechanization of filtration, classification of filters: slow sand filter, rapid sand filter, pressure filter		07/03/2026 09/03/2026			
Construction and working of slow sand filter and rapid sand filter, operational problems in filtration.		11/03/2026			
Disinfection: Objects, methods of disinfection,		16/03/2026			

	Chlorination Application of chlorine, forms of chlorination, types of chlorination practices, residual chlorine and its importance	23-03-2026		
Unit-III Conveyance and Distribution of water	Conveyance: Types of Pipes used for conveyance of water,	25/03/2026		
	choice of pipe material, Types of joints & Types of valves- their use, location and function on a pipeline	28/03/2026 30/03/2026		
	Distribution of water: Methods of distribution of water- Gravity, pumping, and combined system	01/04/2026		
	Service reservoirs - functions and types, Layouts of distribution of Water-Dead end system, grid iron system, circular system, radial system; their suitability, advantages, and disadvantages.	04/04/2026		
Unit-IV Domestic sewage and System of Sewerages	Building Sanitation: Necessity of sanitation	06/04/2026		
	Necessity to treat domestic sewage,	08/04/2026		
	Definitions - Sewage, Sullage, types of sewage.	13/04/2026		
	Definition of the terms related to Building Sanitation- Water pipe, Rainwater pipe, Soil pipe, Sullage pipe, Vent pipe.	18/04/2026		
	Systems of Sewerage and Sewer Appurtenances: Types of Sewers, Systems of sewerage	22/04/2026 25/04/2026		
	self- cleansing velocity and non-scouring velocity, Laying, Testing and maintenance of sewers,	27/04/2026		
	Manholes and Drop Manhole-	29/04/2026		


Unit-V Characteristics and treatment of Sewage	component parts, location, spacing, construction details, Sewer Inlets, Street Inlets.			
	Analysis of sewage: Characteristics of sewage	02-05-2026		
	B.O.D., C.O.D. and its significance.	04-05-2026		
	Central Pollution Control Board Norms for discharge of treated sewage,	06-05-2026		
	Objects of sewage treatment and flow diagram of conventional sewage treatment plant	06/05/2026		
	Treatment of Sewage: Screening, Types of screens,	18-05-2026		
	Grit removal, Skimming, Sedimentation of sewage,	20-05-2026		
	Aerobic and anaerobic process, Sludge digestion, trickling filters, Activated sludge process, Disposal of sewage, Oxidation Pond, Oxidation ditch. Septic tank	23-05-2025 25-05-2025		

Teaching Plan Assignments

Assignment No	Contents of Syllabus Covered	Proposed Date	Actual Date	Remarks
A-1	Unit-1, Unit-2,	10-03-2026		
A-2	Unit-3, Unit-4	11-04-2026		
A-3	Unit-5	16-05-2026		

House Test/Class Test

Name of test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test -1	Unit-1-Unit-2	As per HPTSB Academic Schedule		
Class Test -2	Unit-3Unit-4,			
House Test - 1	Unit-1to Unit -4			


 (Signature of Teacher)
 Er. Amit Thakur


 (Signature of HOD)

Approved

 Principal
 Govt. Polytechnic for Women
 Rehan Distt. Kangra (H.P.)