

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



LESSON PLAN

Program Name	Civil Engineering
Subject Name	Water Resource Engineering
Subject Code	CEPC305
Semester	5 th
Subject Teacher Name	Amit Thakur

Evaluation Scheme

Sr. No.	Subject Name	Study scheme		Marks in Evaluation Scheme					
		(Hrs/Week)		Internal Assessment			External Assessment		
		Th	Pr	Th	Pr	Total	Th	Pr	Total
1.	Water Resource Engineering	4	-	40	-	40	-	60	100
Reference Books		. Punmia, B.C., Pande, B.Lal, Irrigation and Water Power Engineering, Laxmi Publication Subramanyam, Engineering Hydrology Basak, N.N. Irrigation Engineering Priyani V.B., Irrigation Engineering,							

Course Outcomes (COs)

CO – 1	To learn estimation of hydrological parameters
CO – 2	To understand water demand of crops and provisions to meet the same.
CO – 3	To know planning of reservoirs and dams
CO – 4	To design irrigation projects, canal sand other diversion works

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Teaching Plan

	Name of Topic	Proposed Date	Actual Date	Remarks
Unit-I Introduction to Hydrology	Hydrology: Definition and Hydrological cycle	12/08/2024		
	Rain Gauge: Symons rain gauge, automatic rain gauge	13/08/2024		
	Methods of calculating average rainfall: Arithmetic mean, Iso-hyetal, and • Theissen polygon method.	17/08/2024 20/08/2024		
	Runoff, Factors affecting Runoff, Computation of run-off.	22/08/2024 27/08/2024		
Unit-II Crop water requirement and Reservoir Planning	Irrigation and its classification	3e29/08/2024		
	Crop Water requirement: Cropping seasons, Crop period, base period, Duty, Delta, CCA, GCA, intensity of irrigation, factors affecting duty, Problems on water requirement	31/08/2024		
		02/09/2024		
		03/09/2024		
	Methods of application of irrigation water and its assessment.	05/09/2024		
		07/09/2024		
Silting of reservoir, Rate of silting, factors affecting silting and control measures.	09/09/2024			
	10/09/2024			
Class Test-1	12/09/2024			
Unit-III Dams and	Dams and its classification: Earthen dams and Gravity dams	16/09/2024		
		17/09/2024		

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Spillways	(masonry and concrete).			
	Earthen Dams– Components with function, typical cross-section, seepage through embankment and foundation and its control.	19/09/2024		
		21/09/2024		
		23/09/2024		
Methods of construction of earthen dam, types of failure of earthen dam and preventive measures.	24/09/2024			
	26/09/2024			
	28/09/2024			
Gravity Dams–Forces acting on dam, Theoretical and practical profile, typical cross-section. (only theoretical concept)	30/09/2024			
	01/10/2024			
	03/10/2024			
	Spillways-Definition, function & location	05/10/2024		
		07/10/2024		
Unit-IV Minor and Micro Irrigation	Lift irrigation Scheme- Components and their functions, Layout.	08/10/2024		
		10/10/2024		
	Drip and Sprinkler Irrigation-Need, components, and Layout	14/10/2024		
		15/10/2024		
Well irrigation: types and yield of wells, advantages and disadvantages of well irrigation.	19/10/2024			
	21/10/2024			
	22/10/2024			
Unit-V Diversion Head Works & Canals	Weirs–components, parts, types of weirs	24/10/2024		
		26/10/2024		
	Barrages–components and their functions. Difference between weir and Barrage.	26/10/2024		
		02/11/2024		
Canals– Classification according to alignment and position in the canal network,	04/11/2024			
	05/11/2024			
Cross section of canal in embankment and cutting, partial embankment and cutting.	05/11/2024			
	07/11/2024			

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	Canal lining-Purpose, material used and its properties, advantages.	11/11/2024		
	Cross Drainage Works-Aqueduct, siphon aqueduct, super passage, level crossing.	18/11/2024 19/11/2024 21/11/2024		
	Canal Regulators- Head regulator, Cross regulator, Escape, Falls and Outlets	23/11/2024 25/11/2024 26/11/2024		
Unit-VI Water logging	Definition, Causes, Preventive & remedial measures, Reclamation of waterlogged areas	28/11/2024 30/11/2024 02/12/2024		

Assignments

Assignment No	Contents of Syllabus Covered	Proposed Date	Actual Date	Remarks
A-1	Unit-1, Unit-2, Unit-3	16/09/2024		
A-2	Unit-4, Unit-5,	22/10/2024		
A-3	Unit-6	21/11/2024		

House Test/Class Test		Proposed Date	Actual Date	Remarks
Name of test	Syllabus for Tests			
Class Test -1	Unit-1-Unit-2- Unit-3	As per HPTSB Academic Schedule		
Class Test -2	Unit-4Unit-5,			
House Test - 1	Unit-1to Unit -5			

(Signature of Teacher)
Er.Amit Thakur

Approved

(Signature of HOD)

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