

LESSON PLAN (2024-25)-(2025(s))

BRANCH-CIVIL ENGG				Name of The Teaching Faculty: -Anita Pradhan		
Subject-HYDRAULICS& IRRIGATION				Semester From Date:04-02-2025 To Date 17-05-2025		
SEMESTER-4TH			No. Of Weeks:		3P/WEEK	
No. of Days/week class allotted:02period per week(Tues, Thus-1 Period each)				TOTAL PERIOD- 43		
MONTH	Week	DATE	DAYS	Syllabus to be covered	NO. OF PERIODS AVAILABLE	
				PART: A (Hydraulics)		
				1 HYDROSTATICS: (12P)	12	
F E B R U A R Y	2nd	04-02-2025	Tue	1.1 Properties of fluid: density, specific gravity, surface tension.	1	
		06-02-2025	Thu	1.1.1 capillarity,viscosity and their uses	1	
	3rd	11-02-2025	Tue	1.2 Pressure and its measurements: intensity of pressure, atmospheric pressure	1	
		13-02-2025	Thu	1.2 Pressure and its measurements: intensity of pressure, atmospheric pressure	1	
	4th	18-02-2025	Tue	1.2.1gauge pressure, absolute pressure and vacuum pressure.	1	
		20-02-2025	Thu	1.2.1gauge pressure, absolute pressure and vacuum pressure.	1	
	5th	25-02-2025	Tue	2.2.2 relationship between atmospheric pressure, absolute pressure and gauge	1	
		27-02-2025	Thu	2.2.2 relationship between atmospheric pressure, absolute pressure and gauge	1	
	M A R C H	2nd	04-03-2025	Tue	1.2.3 pressure head; pressure gauges.	1
			06-03-2025	Thu	1.3 Pressure exerted on an immersed surface: Total pressure,	1
3rd		11-03-2025	Tue	1.3.1.resultant pressure, expression for total pressure exerted on horizontal & vertical surface.	1	
		13-03-2025	Thu	1.3.1.resultant pressure, expression for total pressure exerted on horizontal & vertical surface.	1	
			Sat	KINEMATICS OF FLUID FLOW: (18P)	18	
		18-03-2025	Tue	2.1 Basic equation of fluid flow and their application: Rate of discharge, equation of continuity of liquid flow, total energy of a liquid in motion- potential,	1	

	4th	20-03-2025	Thu	2.1 Basic equation of fluid flow and their application: Rate of discharge, equation of continuity of liquid flow, total energy of a liquid in motion- potential, kinetic & pressure	1
	5th	25-03-2025	Tue	Bernoulli's theorem and its limitations. Practical applications Bernoulli's equation.	1
		27-03-2025	Thu	Bernoulli's theorem and its limitations. Practical applications Bernoulli's equation.	1
A P R I L	1st	03-04-2025	Thu	2.2 Flow over Notches and Weirs: Notches, Weirs, types of notches and weirs,	1
	2nd	08-04-2025	Tue	2.2 Flow over Notches and Weirs: Notches, Weirs, types of notches and weirs,	1
		10-04-2025	Thu	Notches, Weirs, types of notches	1
	3rd	15-04-2025	Tue	Discharge through different types of notches and weirs-their application (No Derivation)	1
		17-04-2025	Thu	Discharge through different types of notches and weirs-their application (No Derivation)	1
	4th	22-04-2025	Tue	2.3 Types of flow through the pipes: uniform and non uniform; laminar and turbulent flow.	1
		24-04-2025	Thu	2.3. uniform and non uniform; laminar and turbulent flow.	1
	5th	29-04-2025	Tue	turbulent; steady and unsteady; Reynold's number and its application	1
M A Y	1st	01-05-2025	Thu	2.4 Losses of head of a liquid flowing through pipes: Different types of major and minor losses. Simple numerical problems on losses due to friction using Darcys equation.	1
	2nd	06-05-2025	Tue	2.4 Losses of head of a liquid flowing through pipes: Different types of major and minor losses. Simple numerical problems on losses due to friction using Darcys equation.	1
		08-05-2025	Thu	2.4.1 Total energy lines & hydraulic gradient lines (Concept Only).	1
	3rd	13-05-2025	Tue	2.5 Flow through the Open Channels: Types of channel sections-rectangular, trapezoidal and circular, discharge formulae- Chezy's and Manning's equation,	1
		15-05-2025	Thu	2.5 Flow through the Open Channels:	1
			2.5.1 Best economical section.	1	
			CHAPTER -3 PUMPS (5P)	5	

			3.1 Type of pumps	1
			3.2 Centrifugal pump: basic principles, operation, discharge, horse power & efficiency.	1
		EXTRA CLASS	3.2 Centrifugal pump: basic principles, operation, discharge, horse power & efficiency.	1
			3.3 Reciprocating pumps: types, operation, discharge, horse power & efficiency	1
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