Department of Architecture
Govt. Polytechnic(W) Rehan
Distt.– Kangra (H.P.) - 176022

LESSON PLAN

Program Name	Architecture Assistantship
Subject Name	Structure Design-II
Subject Code	ARPC-5003
Semester	5th
Subject Teacher Name	Vipin Kumar

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.	Structure Design-II	3	0	50	-	50	100	-	100
Reference Books		Design of Steel Structures by S. K. Duggal (Limit State Design)							
		R.C.C. Design by Birinder Singh, Kapson Publication(LimIT State Edition)							
		Steel Structure Design by Birinder Singh							

Course Outcomes (COs)

CO – 1	The student shall have developed the necessary skills to understand the basic concepts, terminologies, thumb rule and design processes related to steel structures.
CO – 2	Students will be able to understand and implement the Limit state method of structural analysis in architecture design.
CO - 3	The student will be able to give structural design of components of Steel Structured building.

Teaching Plan

	Name of Topic	Proposed Date	Actual Date	Remarks
UNIT-I **Introduction**	Materials, basis properties of concrete and steel,	16/08/24		
		17/08/24		
		22/08/24		
	Reinforcement, standard loading, characteristics strength, permissible stresses in Concrete and steel as per Indian Standard	23/08/24		
		24/08/24		
		29/08/24		
	Design Philosophies- Working Method, Ultimate Load, Method and Limit state Method.	30/08/24		
		31/08/24		
	Limit State Design Method {as per IS: 456 (2000)} Safety and serviceability requirements, limit states, characteristic material strength and loads and partial safety factors	05/09/24		
		06/09/24		
		07/09/24		1st Class test Schedule
		12/09/24		
UNIT-II **Design calculations**	Calculation of moment of resistance of a simply supported beam	13/09/24		
		19/09/24		
		20/09/24		
		21/09/24		
		26/09/24		
	Design of singly reinforced rectangular simply supported beam as per IS Code	27/09/24		
		28/09/24		
		03/10/24		
		04/10/24		
		05/10/24		
	Design of one way simply supported slab. Concept of two way slab with the help of IS:456	10/10/24		
		11/10/24		
		17/10/24		2nd Class test Schedule
		18/10/24		
		19/10/24		
		24/10/24		
	Design of axially loaded long and short columns as per IS:456	25/10/24		
		26/10/24		
		01/11/24		PTM
		02/11/24		
		07/11/24		
UNIT-III **Steel Structureal Elements**	Classification of sections in Limit State Method, Grades of Structural Steel,Terminology & Properties	08/11/24		House Test Schedule
		14/11/24		
	Bolted connections- types of Bolts, forces in Bolts, types of Bolted joints with Sketches	15/11/24		
		16/11/24		
	Welded connections- types of welds, forces in welds, type, defects in welds	21/11/24		
		22/11/24		

UNIT-IV **Rolled Steel Structureal Elements**	Introduction to the concept of beams, column with single RS section as per IS: 800 and handbook.	23/11/24 28/11/24		
	Hollow sections: General Shapes (Hot Rolled & Cold Form) and advantages & Applications.	29/11/24 30/11/24		

Assignments

Assignment No	Contents of Syllabus Covered	Proposed Date	Actual Date	Remarks
A-1	UNIT -1 & UNIT -2	28/09/24		
A-2	UNIT-2 & UNIT 3	22/11/24		
A-3	UNIT -4	29/11/24		

House Test/Class Test

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

(Signature of Teacher)

(Signature of HOD)

Principal
Govt. Polytechnic(W) Rehan
Distt. Kangra (HP)