



Department of Civil Engineering
 Govt. Polytechnic for Women Rehan
 Distt. - Kangra (H.P.) - 176022
LESSON PLAN

Program Name	Civil Engineering		
Subject Name	Construction Materials		
Subject Code	CEPC201		
Semester	3rd Semester		
Subject Teacher Name			

Sr. No.	Subject Name	Study scheme		Marks In Evaluation Scheme						
		(Hrs/Week)		Internal Assessment				External Assessment		
		Th	DCS	Th	Pr	Total	Th	Pr	Total	
1		3	1	40	-	40	60	-	60	

Reference Books	Rangwala, S.C., Engineering Materials, Charator publisher, Ahmedabad.
	Duggal, S. K. Building Materials, New International, New Delhi.

CO - 1	To learn about various construction materials and understand their relevant characteristics
CO - 2	To be able to identify suitability of various materials for different construction purposes.
CO - 3	To know about natural, artificial, and processed materials available for various purposes of construction activities.

		Name of Topic	Proposed Date	Actual Date	Remarks
1	Unit - I: Overview of Construction Materials	Scope of construction materials in Building Construction	01-08-2024		
2		Transportation Engineering, Environmental Engineering, Irrigation Engineering (applications only).	03-08-2024		
3		Selection of materials for different civil engineering structures based on strength	06-08-2024		
4		Durability, Eco friendly and economy.	08-08-2024		
5		Broad classification of materials - Natural, Artificial, special, finishing and recycled	13-08-2024		
6	Unit - II: Natural Construction Materials	Requirements of good building stone; general characteristics of stone; quarrying and dressing methods and tools for stone.	17-08-2024		
7		Structure of timber, general properties and uses of good timber.	20-08-2024		
8		different methods of seasoning for preservation of timber, defects in timber, use of bamboo in construction.	22-08-2024		
9		Asphalt, bitumen, and tar used in construction, properties and uses	24-08-2024		
10		Properties of lime, its types and uses	27-08-2024		
11		Types of soil and its suitability in construction	29-08-2024		
12		Properties of sand and uses	31-08-2024		
13		Classification of coarse aggregate according to size	03-09-2024		

14	Unit- III: Artificial Construction Materials	Constituents of brick earth, Conventional / Traditional bricks, Modular and Standard bricks, Special bricks –fly ash bricks,	05-09-2024			
15		Characteristics of good brick, Field tests on Bricks, Classification of burnt clay bricks and their suitability	07-09-2024			
16		Manufacturing process of burnt clay brick, fly ash bricks, Aerated concrete blocks.	10-09-2024			
17		Class Test	12-09-2024			
18		Flooring tiles – Types, uses	19-09-2024			
19		Manufacturing process of Cement - dry and wet (only flow chart), types of cement and its uses. Field tests on cement	21-09-2024			
20		Pre-cast concrete blocks- hollow, solid, pavement blocks, and their uses	24-09-2024			
21		Plywood, particle board, Veneers, laminated board and their uses.	26-09-2024			
22		Types of glass: soda lime glass, lead glass and borosilicate glass and their uses.	28-09-2024			
23		Ferrous and non-ferrous metals and their uses.	01-10-2024			
24		Unit- IV: Special Construction Materials	Types of material and suitability in construction works of following materials	03-10-2024		
25			Water proofing, Termite proofing; Thermal and sound insulating materials.	05-10-2024		
26			Fibers – Types –Jute, Glass, Plastic Asbestos Fibers, (only uses).	08-10-2024		
27			10-10-2024			
28	Class Test		15-10-2024			
29	Geo polymer cement: Geo-cement: properties, uses.		17-10-2024			
30			19-10-2024			
31	Unit- V: Processed Construction Materials		22-10-2024			
32		Constituents and uses of POP (Plaster of Paris), POP finishing boards, sizes, and uses	24-10-2024			
33		Paints- whitewash, cement paint, Distempers, Oil Paints and Varnishes with their uses. (Situations where used).	26-10-2024			
34			02-11-2024			
35		Industrial waste materials- Fly ash, Blast furnace slag, Granite and marble polishing waste and their uses.	05-11-2024			
36			07-11-2024			
37		House test	12-11-2024			
38			14-11-2024			
39		Agro waste materials - Rice husk, Bagasse, coir fibers and their uses	16-11-2024			
40			19-11-2024			
41		Special processed construction materials; Geo synthetic, Ferro Crete, Artificial timber, Artificial sand, and their uses	21-11-2024			
42			23-11-2024			
43		26-11-2024				
44		28-11-2024				
44		Doubt Session	30-11-2024			
45		Doubt Session				

Name of Test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test -1	Unit-1	12-09-2024		
Class Test -2	Unit 2 and 3(till date)	15-10-2024		
House Test - 1	Unit 1-4	12-13-14 nov		

(Signature of Teacher)

Approved

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

(Signature of HOD)