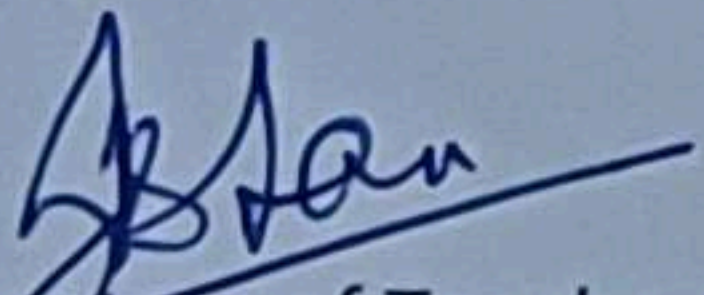
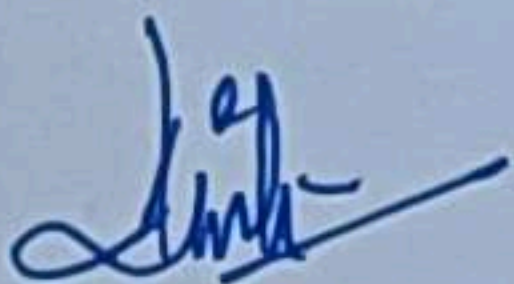


DEPARTMENT OF CIVIL ENGINEERING
GOVERNMENT POLYTECHNIC SUNDERNAGAR

LESSON PLAN FOR Construction Materials (SEMESTER-3rd)SESSION: (Aug-Dec 2025)				
S.No.	MONTH	WEEK	CONTENTS	REMARKS
1	August	Week 1	Unit – I: Overview of Construction Materials: Scope of construction materials in Building Construction, Transportation Engineering, Environmental Engineering,	
		Week 2	Irrigation Engineering (applications only). Selection of materials for different civil engineering structures based on strength durability,	
		Week 3	Eco friendly and economy. Broad classification of materials – Natural, Artificial, special, finishing and recycled.	
		Week 4	Unit – II: Natural Construction Materials: Requirements of good building stone; general characteristics of stone; quarrying and dressing methods and tools for stone.	
		Week 5	Structure of timber, general properties and uses of good timber, different methods of seasoning for preservation of timber, defects in timber,	
2	September	Week 1	use of bamboo in construction. Asphalt, bitumen, and tar used in construction, properties and uses. Properties of lime, its types and uses.	
		Week 2	Types of soil and its suitability in construction. Properties of sand and uses Classification of coarse aggregate according to size. Class Test -1 Will be held this week.	
		Week 3	Unit- III: Artificial Construction Materials : Constituents of brick earth, Conventional / Traditional bricks, Modular and Standard bricks, Special bricks –fly ash bricks,	
		Week 4	Characteristics of good brick, Field tests on Bricks, Classification of burnt clay bricks and their suitability, Manufacturing process of burnt clay brick, fly ash bricks, Aerated concrete blocks. Flooring tiles – Types, uses	
		Week 5	Manufacturing process of Cement - dry and wet (only flow chart), types of cement and its uses. Field tests on cement. Pre-cast concrete blocks- hollow, solid, pavement blocks, and their uses.	
3	October	Week 1	Plywood, particle board, Veneers, laminated board and their uses. Types of glass: soda lime glass, lead glass and borosilicate glass and their uses. Ferrous and non-ferrous metals and their uses.	
		Week 2	Unit– IV: Special Construction Materials: Types of material and suitability in construction works of following materials: Water proofing, Termite proofing;	

3	October	Week 3	Thermal and sound insulating materials. Fibers – Types –Jute, Glass, Plastic Asbestos Fibers, (only uses). Geo polymer cement: Geo-cement: properties, uses. Class Test -2 Will be held this week.	
		Week 4	Unit– V: Processed Construction Materials Constituents and uses of POP (Plaster of Paris), POP finishing boards, sizes, and uses. Paints- whitewash, cement paint, Distempers, Oil Paints and Varnishes with their uses. (Situations where used).	
		Week 5	Industrial waste materials- Fly ash, Blast furnace slag, Granite and marble polishing waste and their uses.	
4	November	Week 1	Agro waste materials - Rice husk, Bagasse, coir fibers and their uses. Special processed construction materials; Geo synthetic, Ferro Crete, Artificial timber, Artificial sand, and their uses.	
		Week 2	House Test will be held this week	
		Week 3	Revision of Previous Year Question Papers	
		Week 4	Revision of Previous Year Question Papers	
		Week 5	Revision of Previous Year Question Papers	
5	December	Week 1	Doubt Clearing Sessions & Discussion on Previous Years Question Papers	


 Signature of Teacher
 (Er Ishan Sharma)


 Signature of H.O.D
 (Er Anita Joshi)