

GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN- 2026-27 (WINTER)

Discipline : CIVIL ENGG.		Semester: 5th		Name of the Teaching Faculty : AMAN MOHANTY	
Subject : ACT		No. of Days / per week class allotted : 03		Semester From date : 01.07.2026	To Date : 05.11.2026
MONTH	Week	Day	Unit	Topics	
JULY	1st		UNIT-I	Advanced Construction Materials	
		4th		Fibres: Use and properties of steel, polypropylene, carbon and glass fibres.	
		6th		Plastics: Use and properties of PVC, RPVC, HDPE, FRP, GRP	
	2nd	2nd		Miscellaneous Materials: Properties and uses of acoustics materials,	
		4th		wall claddings	
		2nd		plaster boards, micro-silica,	
	3rd	4th		RATH YATRA	
		6th		waterproofing materials, adhesives	
		2nd		Use of waste products and industrial by products in bricks, blocks, concrete and mortar	
	4th		UNIT-II	Advanced Concreting Methods and Equipment	
		4th		Ready Mix Concrete: Necessity and use of ready mix concrete	
		2nd		Products and equipment for ready mix concrete plant	
AUGUST	1st	4th		Conveying of ready mix concrete, transit mixers.	
		6th		Question Discussion	
		2nd		Properties, workability and water cement ratio of the concrete.	
	2nd	4th		Underwater Concreting: Procedure and equipment required for Tremie method, Drop bucket method	
		2nd		Special concrete: procedure and uses of special concretes: Roller compacted concrete,	
		4th		Self-compacting concrete (SCC), Steel fibre reinforced concrete, Foam concrete, shotcreting	
	3rd		UNIT-III	Advanced Technology in Constructions	
		6th		Construction of bridges and flyovers: Equipment	
		2nd		Machineries required for foundation and super structure	
	4th	4th		Construction of multi-storeyed Building: Equipment and machinery required for construction of multi-storeyed building such as use of lifts,	
		2nd		Belt conveyers, pumping of concrete.	
		4th		Prefabricated construction: Methods of prefabrication, Plant fabrication and site fabrication	
	5th	6th		All prefabricated building elements such as wallpanels, slab panels, beams, columns, door and window frames	
		2nd		Equipment and machineries used for placing	
		4th		Jointing of prefabricated elements.	
	1st	6th		Strengthening of embankments by soil reinforcing techniques using geo-synthetics	
		2nd		1st Internal Assessment	

SEPTEMBER	2nd		UNIT-IV	Hoisting and Conveying Equipment	
		4th		Hoisting Equipment: Principles and working of Derrick-Pole, Gin Pole, Crane,	
	3rd	2nd		NUAKHAI	
		4th		Power driven scotch derrick crane, Hand operated crane, Locomotive crane, Tower crane, Lattice Girder	
		6th		Winches, Elevators, ladders. Crawler cranes, Truck mounted cranes, Gantry cranes, Mast cranes	
	4th	2nd		Conveying Equipment: Working of belt conveyers,	
		4th		Types of belts and conveying mechanism	
5th	2nd	Capacity and use of dumpers, tractors and trucks.			
OCTOBER	1st	4th	UNIT-V	Miscellaneous Machineries and Equipment	
		6th		Excavation Equipment: Use, working and output of following machinery – bull dozers, scrapers, graders,	
	2nd	2nd		Clam Shell, trenching equipment	
		4th		Tunnel boring machine, Wheel mounted belt loaders, power shovels, JCB, and drag lines.	
	3rd	2nd		Compacting Equipment: Output of different types of rollers such as plain rollers, ship footed rollers, vibratory, pneumatic rollers rammers.	
		4th		Miscellaneous Equipment: Working and selection of equipment: Pile driving equipment	
		6th			
	4th	2nd		MAHASAPTAMI	
		4th		Floor polishing and cutting machine selection of drilling pattern for blasting	
	5th	2nd		2nd Internal Assessment	
		4th		Bentonite/mud slurry in drilling, Explosives for blasting	
	NOVEMBER	1st		2nd	
4th				Revision and Previous Year Question Discussion	
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Subject Expert
(Civil Engg.)

HOD, Civil Engg.

Academic Co-ordinator