

DHABALESWAR INSTITUTE OF POLYTECHNIC

LESSON PLAN

Discipline:	Semester: 6 th	Name of the Teaching Faculty Tanmayee Sathi
Subject: TH-3	No. of days per week Class Alloted: 4	Semester from Dt. 14/02/23 to Dt. 23/05/23 No. of Weeks: 15
Week	Class Day	Theory / Practical Topics
1 st week	1 st day	1- Advanced Construction materials 1.1 - Fibers and Plastics - → Types of fibers - steel, carbon, glass fibers, use of fibers as construction materials, properties of fibers.
	2 nd day	→ Types of plastics - PVC, RPVC, HDPE, FRP, GFRP etc. Coloured plastic sheets.
	3 rd day	→ Use of plastic as construction material.
2 nd week	1 st day	1.2 - Artificial Timbers - Properties and uses of artificial timber.
	2 nd day	Types of artificial timber available in market, strength of artificial timber.
	3 rd day	1.3 - Miscellaneous Materials - Properties and uses of acoustic materials, wall claddings, plaster boards, micro-silica, artificial sand, bonding agents, adhesives etc.
3 rd week	4 th day	
	1 st day	

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4th week	2nd day	<u>2- Prebabrication :-</u>
	3rd day	2.1- Introduction, necessity and scope of prebabrication of building.
	4th day	History of prebabrication, current uses of prebabrication, types of prebabrication systems, classification of prebabrication. Advantages and disadvantages of prebabrication.
	7th day	2.2- The theory and process of prebabrication, design principle of prebabricated systems, types of prebabricated elements, modular coordination.
	2nd day	2.3- Indian standard recommendation for modular planning.
	3rd day	
5th week	1st day	<u>3- Earthquake Resistant Construction</u>
	2nd day	3.1- Building Configuration
	3rd day	3.2- Lateral load resisting structure
	4th day	3.3- Building characteristics.
		3.4- Effect of structural irregularities, plan configuration problems.

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6th week	1st day	3.5- safety consideration during additional construction and alteration of existing Buildings.
	2nd day	
	3rd day	
	4th day	
7th week	1st day	3.6- Additional strengthening measures in masonry building - corner reinforcement, lintel band, sill band, Plinth band, roof band, gable band etc.
	2nd day	4- Retrobitting of Structures -
8th week	1st day	4.1- seismic retrobitting of reinforced concrete buildings :
	2nd day	4.2- sources of weakness in RC frame building.
	1st day	4.3- classification of retrobitting techniques and their uses.
	2nd day	5- Building services :-
9th week	2nd day	5.1- Cold water Distribution in high rise building, Lay out of installation
	3rd day	5.2- Hot water supply - General principles for central plants - Lay out.
	1st day	5.3- Sanitation - soil and waste water installation in high rise buildings.

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Week	Class Day	Theory / Practical Topics
10 th Week	2 nd day	5.4- Electrical Services - (i) requirements in high rise building (ii) Layout of wiring - types of wiring (iii) Fuses and their types (iv) Earthing and their uses
	3 rd day	
	1 st class	5.5 - Lighting - Requirement of light measurement of light intensity
	2 nd class	5.6. Ventilation - Methods of Vent (Natural and artificial systems of ventilation) problems on Ventilation
	3 rd class	5.7- Mechanical Services - Lifts, Escalators, Elevators - types and uses
11 th Week		<u>6- Construction and earth moving equipments :-</u>
	1 st class	6.1- Planning and selection of construction equipments
	2 nd class	6.2- Study on earth moving equipments like drag line, tractor, bulldozer, Power Shovel
	3 rd class	6.3- study and uses of compaction equipments like tamping rollers, smooth wheel rollers, pneumatic tired rollers and Vibrating compactors
	4 th class	6.4- Owning and Operating cost - Problems

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Week	Class Day	Theory / Practical Topics
12 th Week	1 st class 2 nd class 3 rd class 4 th class	7- Soil reinforcing techniques: 7.1- Necessity of soil reinforcing. 7.2- Use wire mesh and geo-synthetics. 7.3- Strengthening of embankments, slope stabilization in cutting and embankments by soil reinforcing techniques.
13 th Week	Revision	
14 th Week	Revision	
15 th Week		