

## LESSON PLAN FOR SUMMER 2022

DISCIPLINE:- CIVIL ENGG.		SEMESTER:-4TH SEM SEC A	NAME OF THE TEACHING FACULTY:- SUBHRADEEP DAS (PTGF)
SUBJECT:-ADVANCED CONSTRUCTION TECHNIQUE,TH.3		NO. OF DAYS/PER WEEK CLASS ALLOTTED:- 5T	SEMESTER - 6TH SEM 2ND SHIFT FROM DATE-10/03/2022 TO DATE-10/06/2022 NO. OF WEEKS-14WEEKS
WEEK	DATE	CLASS DAY	THEORY TOPICS
			<b>1 Advanced construction materials (10P)</b>
1st WEEK	3/10/2022	3rd	1.1 Fibers and Plastics- Types of fibers- Steel, Carbon, glass fibers, Use of fibers as construction material, properties of Fibers. Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets. Use of plastic as construction material.
2nd WEEK	3/14/2022	1st	1.1 Fibers and Plastics- Types of fibers- Steel, Carbon, glass fibers, Use of fibers as construction material, properties of Fibers. Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets. Use of plastic as construction material.
	3/15/2022	2nd	1.1 Fibers and Plastics- Types of fibers- Steel, Carbon, glass fibers, Use of fibers as construction material, properties of Fibers. Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets. Use of plastic as construction material.
	3/17/2022	3rd	1.2 Artificial Timbers – Properties and uses of artificial timber. Types of artificial timber available in market, strength of artificial timber.
3RD WEEK	3/21/2022	1st	1.2 Artificial Timbers – Properties and uses of artificial timber. Types of artificial timber available in market, strength of artificial timber.
	3/22/2022	2nd	1.3 Miscellaneous materials – Properties and uses of acoustics materials, wall claddings, plaster boards, micro-silica, artificial sand, bonding agents, adhesives
	3/24/2022	3rd	1.3 Miscellaneous materials – Properties and uses of acoustics materials, wall claddings, plaster boards, micro-silica, artificial sand, bonding agents, adhesives etc.
	3/28/2022	1st	1.3 Miscellaneous materials – Properties and uses of acoustics materials, wall claddings, plaster boards, micro-silica, artificial sand, bonding agents, adhesives etc.
			<b>2 Prefabrication (8P)</b>

4th WEEK	3/28/2022	1st	2.1 Introduction, necessity and scope of prefabrication of buildings, history of prefabrication, current uses of prefabrication , types of prefabricated systems, classification of prefabrication, advantages and disadvantages of prefabrication,
	3/29/2022	2nd	2.1 Introduction, necessity and scope of prefabrication of buildings, history of prefabrication, current uses of prefabrication , types of prefabricated systems, classification of prefabrication, advantages and disadvantages of prefabrication,
	3/31/2022	3rd	2.1 Introduction, necessity and scope of prefabrication of buildings, history of prefabrication, current uses of prefabrication , types of prefabricated systems, classification of prefabrication, advantages and disadvantages of prefabrication,
5th WEEK	4/4/2022	1st	2.2 The theory and process of prefabrication, design principle of prefabricated systems, types of prefabricated
	4/5/2022	2nd	2.2 The theory and process of prefabrication, design principle of prefabricated systems, types of prefabricated
	4/7/2022	3rd	2.2 The theory and process of prefabrication, design principle of prefabricated systems, types of prefabricated
6th WEEK	4/11/2022	1st	2.3 Indian standard recommendation for modular planning.
			<b>3 .Earthquake Resistant Construction (8P)</b>
	4/11/2022	1st	
	4/12/2022	2nd	3.2 Lateral Load resisting structures
7th WEEK	4/18/2022	1st	3.3 Building characteristics
	4/19/2022	2nd	3.4 Effect of structural irregularities-vertical irregularities, plan configuration problems.
	4/21/2022	3rd	3.5 Safety consideration during additional construction and alteration of existing Buildings.
8th WEEK	4/25/2022	1st	3.5 Safety consideration during additional construction and alteration of existing Buildings. 3.6 Additional strengthening measures in masonry building-corner reinforcement, lintel band, sill band, plinth band, roof band, gable band etc
			<b>4 Retrofitting of Structures (8P)</b>
	4/26/2022	2nd	4.1 Seismic retrofitting of reinforced concrete buildings :
	4/28/2022	3rd	4.1 Seismic retrofitting of reinforced concrete buildings :
	5/2/2022	1st	4.2 -Sources of weakness in RC frame building
	5/5/2022	3rd	4.2 -Sources of weakness in RC frame building
	5/9/2022	1st	4.3 - Classification of retro fitting technique and their uses

9th WEEK	5/10/2022	2nd	4.3 - Classification of retro fitting technique and their uses
			<b>5. BUILDING SERVICES (8P)</b>
	5/12/2022	3rd	5.1 Cold Water Distribution in high rise building, lay out of installation
	5/17/2022	2nd	5.2 Hot water supply – General principles for central plants-layout
10th WEEK	5/19/2022	3rd	5.3 Sanitation –soil and waste water installation in high rise buildings
	5/23/2022	1st	5.4 Electrical services – i) requirements in high rise buildings ii) Layout of wiring - types of wiring iii) Fuses
	5/24/2022	2nd	5.5 Lighting – Requirement of lighting, Measurement of light intensity
11th WEEK	5/26/2022	3rd	5.6 Ventilation - Methods of ventilation (Natural and artificial Systems of ventilation) problems on ventilation
	5/31/2022	2nd	5.7 Mechanical Services- Lifts, Escalator, Elevators – types and uses.
			<b>6 Construction and earth moving equipments –(10P)</b>
12th WEEK	6/2/2022	3rd	6.1 Planning and selection of construction equipments
	6/6/2022	1st	6.1 Planning and selection of construction equipments
	6/7/2022	2nd	6.2 Study on earth moving equipments like drag line, tractor, bulldozer, Power shovel
	6/9/2022	3rd	6.2 Study on earth moving equipments like drag line, tractor, bulldozer, Power shovel
			6.2 Study on earth moving equipments like drag line, tractor, bulldozer, Power shovel
			6.3 Study and uses of compacting equipments like tamping rollers, Smooth wheel rollers, Pneumatic tired rollers and vibrating compactors
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13th WEEK			6.4 Owing and operating cost – problems
			<b>7 Soil reinforcing techniques (8P)</b>
			7.1 Necessity of soil reinforcing.
14th WEEK			7.2 Use wire mesh and geo-synthetics
			7.3 Strengthening of embankments, Slope stabilization in cutting and embankments by soil reinforcing techniques.
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