

Lesson plan (2022-23)

Discipline: civil engineering	Sem.: 6 TH	Name of teaching faculty: Binod jena (PTGF)
Sub: ACTE	No. of days/pe r week class allotted : 4	Sem. From date: 14/02/2023 To date: No. of weeks: 15
Week	Class Day	Topics
1 ST		1. Advanced construction material
	1 ST	Types of fibers- Steel, Carbon, glass fibers, Use of fibers as construction material, properties of Fibers.
	2 ND	Types of fibers- Steel, Carbon, glass fibers, Use of fibers as construction material, properties of Fibers.
	3 RD	Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets.
	4 TH	Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets. Use of plastic as construction material
2 ND	1 ST	Properties and uses of artificial timber.
	2 ND	Properties and uses of artificial timber.
	3 RD	Types of artificial timber available in market, strength of artificial timber.
	4th	Miscellaneous materials – Properties and uses of acoustics materials, wall claddings,
3 RD	1 ST	plaster boards, micro-silica,
	2 ND	artificial sand, bonding agents, adhesives etc.
		2. Earthquake Resistant Construction
	3 RD	2.1 Introduction, necessity and scope of prefabrication of buildings,
	4th	history of prefabrication, current uses of prefabrication
4 TH	1 ST	types of prefabricated systems, classification of prefabrication, advantages and disadvantages of prefabrication
	2 ND	2.2 The theory and process of prefabrication,
	3 RD	design principle of prefabricated systems, types of prefabricated elements,
	4 TH	Effect of structural irregularities-vertical irregularities, plan configuration problems.
5 TH	1 ST	modular coordination
	2 ND	2.3 Indian standard recommendation for modular planning.
		3. Earthquake Resistant Construction
	3 RD	3.1 Building Configuration
	4 TH	3.2 Lateral Load resisting structures
6 TH	1 ST	3.3 Building characteristics
	2 ND	3.4 Effect of structural irregularities-vertical irregularities, plan configuration problems
	3 RD	3.4 Effect of structural irregularities-vertical irregularities, plan configuration problems

18/02/23

PTGF

Principal
Govt. Polytechnic
Malkangiri, (Odisha)

18/02/2023

	4 TH	3.5 Safety consideration during additional construction and alteration of existing Buildings
7 TH	1 ST	3.5 Safety consideration during additional construction and alteration of existing Buildings
	2 ND	3.6 Additional strengthening measures in masonry building-corner reinforcement, lintel band, sill band, plinth band, roof band, gable band etc
		4. Retrofitting of Structures
	3 RD	4.1 Seismic retrofitting of reinforced concrete buildings :
	4 TH	4.1 Seismic retrofitting of reinforced concrete buildings :
8 TH	1 ST	4.1 Seismic retrofitting of reinforced concrete buildings :
	2 ND	4.2 -Sources of weakness in RC frame building
	3 RD	4.2 -Sources of weakness in RC frame building
	4 TH	4.2 -Sources of weakness in RC frame building
9 TH	1 ST	4.3 -Classification of retrofitting techniques and their uses
	2 ND	4.3 -Classification of retrofitting techniques and their uses
		5. Building Services
	3 RD	5.1 Cold Water Distribution in high rise building, lay out of installation
	4 TH	5.2 Hot water supply – General principles for central plants-layout
10 TH	1 ST	5.3 Sanitation –soil and waste water installation in high rise buildings
	2 ND	5.4 Electrical services – i) requirements in high rise buildings ii) Layout of wiring - types of
	3 RD	5.4 Electrical services iii) Fuses and their types iv) Earthing and their uses
	4 th	5.5 Lighting – Requirement of lighting, Measurement of light intensity
11 TH	1 ST	5.6 Ventilation - Methods of ventilation (Natural and artificial Systems of ventilation) problems on ventilation
	2 ND	5.7 Mechanical Services- Lifts, Escalator, Elevators – types and uses.
		6. Construction and earth moving equipments
	3 rd	6.1 Planning and selection of construction equipments
	4 TH	6.2 Study on earth moving equipments like drag line, tractor, bulldozer, Power shove
12 TH	1 ST	6.2 Study on earth moving equipments like drag line, tractor, bulldozer, Power shove
	2 ND	6.2 Study on earth moving equipments like drag line, tractor, bulldozer, Power shove
	3 RD	6.2 Study on earth moving equipments like drag line, tractor, bulldozer, Power shove
	4 TH	6.3 Study and uses of compacting equipments like tamping rollers, Smooth wheel rollers, Pneumatic tired rollers and vibrating compactors
13 TH	1 ST	6.3 Study and uses of compacting equipments like tamping rollers, Smooth wheel rollers, Pneumatic tired rollers and vibrating compactors
	2 ND	6.4 Owning and operating cost – problems
	3 RD	6.4 Owning and operating cost – problems
	4 TH	6.4 Owning and operating cost – problems
		7. Soil reinforcing techniques
14 TH	1 ST	7.1 Necessity of soil reinforcing.
	2 ND	7.1 Necessity of soil reinforcing.
	3 RD	7.1 Necessity of soil reinforcing.
	4 TH	7.2 Use wire mesh and geo-synthetics.
15 TH	1 ST	7.2 Use wire mesh and geo-synthetics.

28/09/23
K/2/23

08/02/2023

2 ND	7.3 Strengthening of embankments, Slope stabilization in cutting and embankments by soil reinforcing techniques.
3 RD	7.3 Strengthening of embankments, Slope stabilization in cutting and embankments by soil reinforcing techniques.
4 TH	7.3 Strengthening of embankments, Slope stabilization in cutting and embankments by soil reinforcing techniques.

[Handwritten signature]

[Handwritten signature]
08/02/2023

[Handwritten signature]
Principal
Govt. Polytechnic
Malkangiri, (Odisha)