NILASAILA INSTITUTE OF SCIENCE & TECHNOLOGY
SERGARH-756060, BALASORE (ODISHA)
(Approved by AICTE& affiliated to SCTE&VT, Odisha)

LESSON PLAN

SUBJECT: CEPC 201 TH-1 (BUILDING CONSTRUCTION)

Name Of The Faculty :- Er.Romalini Rout
Branch :- Civil Engineering **Semester :-** 3rd
Academic Year : 2025-26 **Examination :-** 2025 (w)

CHAPTER WISE DISTRIBUTION OF PERIODS

Sl.No.	Name of the chapter as per the Syllabus	No. of Periods as per the Syllabus	No. of periods actually needed
1	Overview of Building Components	4	6
2	Construction of Substructure	8	10
3	Construction of Superstructure	12	14
4	Building Communication and Ventilation	8	10
5	Building Finishes	13	16
	Total Period:	45	60

R. Rout 10.7.2025
Sign of Faculty

10.7.2025
Sign of H.O.D.

Name of the programme: Diploma in CIVIL ENGINEERING	Semester: 3rd	**Name of the Teaching Faculty:** Er. Romalini Rout	
		Academic Year : 2025-26 **Examination :** 2025 (W)	
Course Code: CEPC 201 TH-1	**Course Year:** Second Year	**No. of Classes Alloted Per Week :**	4
		Planned Classes Required to Complete the Course	60

Week	Class Day	Topics to be Covered
1st	1st	**1. OVER VIEW OF BUILDING COMPONENT** Classification of Buildings as per National Building Code Group A to I
	2nd	Types of Constructions- Load Bearing Structure, Framed Structure, Composite Structure.
	3rd	Types of Constructions- Load Bearing Structure, Framed Structure, Composite Structure.
	4th	Building Components – Functions of Building Components, substructure – Foundation, Plinth.
2nd	1st	Superstructure – Walls, Partition wall, Cavity wall, Sill, Lintel, Doors and Windows, Floor, Mezzanine floor, Roof, Columns, Beams, Parapet.
	2nd	Superstructure – Walls, Partition wall, Cavity wall, Sill, Lintel, Doors and Windows, Floor, Mezzanine floor, Roof, Columns, Beams, Parapet.
	3rd	**2.Construction of Substructure** Job Layout: Site Clearance, Layout for Load Bearing Structure and Framed Structure by Center Line and Face Line Method, Precautions.
	4th	Earthwork: Excavation for Foundation, Timbering and Strutting, Earthwork for embankment, Material for plinth Filling, Tools and plants used for earthwork.
3rd	1st	Earthwork: Excavation for Foundation, Timbering and Strutting, Earthwork for embankment, Material for plinth Filling, Tools and plants used for earthwork.
	2nd	Earthwork: Excavation for Foundation, Timbering and Strutting, Earthwork for embankment, Material for plinth Filling, Tools and plants used for earthwork.
	3rd	Foundation: Functions of foundation,
	4th	Foundation: Functions of foundation,
4th	1st	Types of foundation – Shallow Foundation, Stepped Footing, Wall Footing, Column Footing, Isolated and Combined Column Footing, Raft Foundation, Grillage Foundation.
	2nd	Types of foundation – Shallow Foundation, Stepped Footing, Wall Footing, Column Footing, Isolated and Combined Column Footing, Raft Foundation, Grillage Foundation.

4th	3rd	Types of foundation – Shallow Foundation, Stepped Footing, Wall Footing, Column Footing, Isolated and Combined Column Footing, Raft Foundation, Grillage Foundation.
	4th	Deep Foundation – Pile Foundation, Well foundation and Caissons, Pumping Methods of Dewatering, Deep wells, Well points, Cofferdams (Introduction only).
5th	1st	Deep Foundation – Pile Foundation, Well foundation and Caissons, Pumping Methods of Dewatering, Deep wells, Well points, Cofferdams (Introduction only).
	2nd	**3.Construction of Superstructure** **Stone Masonry**: Terms used in stone masonry- facing, backing, hearting, through stone, corner stone, cornice.
	3rd	Stone Masonry: Terms used in stone masonry- facing, backing, hearting, through stone, corner stone, cornice.
	4th	Types of stone masonry: Rubble masonry, Ashlar Masonry and their types. Joints in stone masonry and their purpose.
6th	1st	Selection of Stone Masonry, Precautions to be taken in Stone Masonry Construction.
	2nd	Brick masonry: Terms used in brick masonry- header, stretcher, closer, quoins, course, face, back, hearting, bat bond, joints, lap, frog line, level and plumb.
	3rd	Brick masonry: Terms used in brick masonry- header, stretcher, closer, quoins, course, face, back, hearting, bat bond, joints, lap, frog line, level and plumb.
	4th	Bonds in brick masonry- header bond, stretcher bond, English bond and Flemish bond. Requirements of good brick masonry. Junctions in brick masonry and their purpose and procedure.
7th	1st	Precautions to be observed in Brick Masonry Construction. Comparison between stone and Brick Masonry. Tools and plants required for construction of stone and brick masonry. Hollow concrete block masonry and composite masonry.
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	4th	Scaffolding and Shoring: Purpose, Types of Scaffolding, Process of Erection and Dismantling.
8th	1st	Scaffolding and Shoring: Purpose, Types of Scaffolding, Process of Erection and Dismantling.
	2nd	Scaffolding and Shoring: Purpose, Types of Scaffolding, Process of Erection and Dismantling.

8th	**3rd**	Underpinning. Formwork: Definition of Formwork, Requirements of Formwork, Materials used in Formwork, Types of Formwork, Removal of formwork
	4th	Underpinning. Formwork: Definition of Formwork, Requirements of Formwork, Materials used in Formwork, Types of Formwork, Removal of formwork
9th	**1st**	Underpinning. Formwork: Definition of Formwork, Requirements of Formwork, Materials used in Formwork, Types of Formwork, Removal of formwork
	2nd	**4.Building Communication and Ventilation :-** **Horizontal Communication**: Doors –Components of Doors, Full Paneled Doors, Part ly Paneled and Glazed Doors, Flush Doors, Collapsible Doors, Rolling Shutters, Revolving Doors, Glazed Doors. Sizes of Door recommended by BIS.
	3rd	Components of Doors, Full Paneled Doors, Part ly Paneled and Glazed Doors, Flush Doors, Collapsible Doors, Rolling Shutters, Revolving Doors, Glazed Doors. Sizes of Door recommended by BIS.
	4th	Components of Doors, Full Paneled Doors, Part ly Paneled and Glazed Doors, Flush Doors, Collapsible Doors, Rolling Shutters, Revolving Doors, Glazed Doors. Sizes of Door recommended by BIS.
10th	**1st**	**Windows**: Component of windows, Types of Windows – Full Paneled, Partly Paneled and Glazed, wooden, Steel, Aluminum windows, Sliding Windows, Louvered Window, Bay win- dow, Corner window, clear storey window, Gable and Dormer window, Skylight. Sizes of Windows recommended by BIS. Ventilators.
	2nd	Component of windows, Types of Windows – Full Paneled, Partly Paneled and Glazed, wooden, Steel, Aluminum windows, Sliding Windows, Louvered Window, Bay win- dow, Corner window, clear storey window, Gable and Dormer window, Skylight. Sizes of Windows recommended by BIS. Ventilators.
	3rd	Vertical Communication:Means of Vertical Communication- Stair Case,Ramps,Lift.
	4th	Vertical Communication:Means of Vertical Communication- Stair Case,Ramps,Lift.
11th	**1st**	Elevators and Escalators. Terms used in staircase steps, tread, riser, nosing, soffit, waist slab, baluster, balustrade, scotia, hand rails
	2nd	Elevators and Escalators. Terms used in staircase steps, tread, riser, nosing, soffit, waist slab, baluster, balustrade, scotia, hand rails
	3rd	Newel post, landing, headroom, winder. Types of staircase (On the basis of shape
	4th	Newel post, landing, headroom, winder. Types of staircase (On the basis of shape

12th	1st	Straight, dog-legged, open well, Spiral, quarter turn, bifurcated, Three quarter turn and Half turn, (On the basis of Material): Stone, Brick, R.C.C., wooden and Metal.
	2nd	**5.Building Finishes** Floors and Roofs: Types of Floor Finishes and its suitability- Kota, Marble, Granite, Ceramic Tiles, Vitrified
	3rd	Floors and Roofs: Types of Floor Finishes and its suitability- Kota, Marble, Granite, Ceramic Tiles, Vitrified
	4th	Chequered Tiles, Paver Blocks, Concrete Floors, wooden Flooring, Skirting and Dado.
13th	1st	Process of Laying and Construction, Finishing and Polishing of Floors, Roofing Ma terials- RCC, Mangalore Tiles, AC Sheets, G.I. sheets.
	2nd	Process of Laying and Construction, Finishing and Polishing of Floors, Roofing Ma terials- RCC, Mangalore Tiles, AC Sheets, G.I. sheets.
	3rd	Corrugated G.I. Sheets, Plastic and Fibre Sheets. Types of Roof: Flat roof, Pitched Roof- King Post truss, Queen Post Truss, terms used in roofs**.**
	4th	Corrugated G.I. Sheets, Plastic and Fibre Sheets. Types of Roof: Flat roof, Pitched Roof- King Post truss, Queen Post Truss, terms used in roofs**.**
14th	1st	Corrugated G.I. Sheets, Plastic and Fibre Sheets. Types of Roof: Flat roof, Pitched Roof- King Post truss, Queen Post Truss, terms used in roofs.
	2nd	Wall Finishes: Plastering – Necessity of Plastering, Procedure of Plastering
	3rd	Wall Finishes: Plastering – Necessity of Plastering, Procedure of Plastering
	4th	Wall Finishes: Plastering –Single Coat Plaster, Double Coat Plaster, Rough finish, Neeru Finishing and Plaster of Paris (POP).
15th	1st	Wall Finishes: Plastering –Single Coat Plaster, Double Coat Plaster, Rough finish, Neeru Finishing and Plaster of Paris (POP).
	2nd	Special Plasters- Stucco plaster, sponge finish, pebble finish. Plaster Board and Wall Claddings. Precautions to be taken in plastering,
	3rd	Special Plasters- Stucco plaster, sponge finish, pebble finish. Plaster Board and Wall Claddings. Precautions to be taken in plastering,
	4th	Defects in plastering. Painting – Necessity, Types of painting and procedure of Painting. Painting –Necessity, Surface Preparation for painting, Methods of Application.

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