

Discipline: Civil Engg.	Semester: 3rd	Name of the Teaching Faculty: BIDHU BHUSAN SABAR
Subject: Building Construction	No. of Days/Per week class allotted: 03	Semester From Date: 01.07.2026 To Date: 05.11.2026
		No. of Weeks: 18 Weeks
WEEK	Class Days	TOPIC TO BE COVERED
1ST	1st	Overview of Building Components 4(p) Classification of Buildings as per National Building Code Group A to I,
	2nd	as per Types of Constructions- Load Bearing Structure, Framed Structure, Composite Structure.
	3rd	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	Construction of Substructure 8(p) Job Layout: Site Clearance, Layout for Load Bearing Structure and Framed Structure by Center Line and Face Line Method, Precautions.
	3rd	Earthwork: Excavation for Foundation, Timbering and Strutting, Earthwork for embankment
3RD	1st	Material for plinth Filling, Tools and plants used for earthwork.
	2nd	Foundation: Functions of foundation,
	3rd	Types of foundation – Shallow Foundation, Stepped Footing, Wall Footing, Column Footing.
4TH	1st	Isolated and Combined Column Footing, Raft Foundation, Grillage Foundation.
	2nd	Deep Foundation – Pile Foundation, Well foundation and Caissons,
	3rd	Pumping Methods of Dewatering, Deep wells, Well points, Cofferdams (Introduction only).
5TH	1st	Construction of Superstructure 12(p) Stone Masonry: Terms used in stone masonry- facing, backing, hearting, through stone, corner stone, cornice.
	2nd	Types of stone masonry: Rubble masonry, Ashlar Masonry and their types.
6TH	1st	Joints in stone masonry and their purpose.
	2nd	Selection of Stone Masonry, Precautions to be taken in Stone Masonry Construction.
	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.
7TH	1st	Bonds in brick masonry- header bond, stretcher bond, English bond and Flemish bond.
	2nd	Requirements of good brick masonry. Junctions in brick masonry and their purpose and procedure.
8TH	1st	Precautions to be observed in Brick Masonry Construction. Comparison between stone and Brick Masonry.
	2nd	Tools and plants required for construction of stone and brick masonry. Hollow concrete block masonry and composite masonry.
9TH	1st	Scaffolding and Shoring: Purpose, Types of Scaffolding, Process of Erection and Dismantling.
	2nd	Purpose and Types of Shoring, Underpinning. Formwork: Definition of Formwork
	3rd	Requirements of Formwork, Materials used in Formwork, Types of Formwork, Removal of formwork.
10TH	1st	Building Communication and Ventilation 8(p) Horizontal Communication: Doors – Components of Doors, Full Paneled Doors,
	2nd	Partly Paneled and Glazed Doors, Flush Doors, Collapsible Doors, Rolling Shutters, Revolving Doors, Glazed Doors. Sizes of Door recommended by BIS.
	3rd	Windows: Component of windows, Types of Windows – Full Paneled, Partly Paneled and Glazed, wooden, Steel, Aluminum windows
11TH	1st	Sliding Windows, Louvered Window, Bay window, Corner window, clear storey window, Gable and Dormer window, Skylight. Sizes of Windows recommended by BIS. Ventilators.
	2nd	Fixtures and fastenings for doors and windows. Material used and functions of Window Sill and Lintels, Shed / Chajja.
	3rd	Vertical Communication: Means of Vertical Communication- Stair Case, Ramps, Lift, Elevators and Escalators.

12TH	1st	Terms used in staircase steps, tread, riser, nosing, soffit, waist slab, baluster, balustrade, scotia, hand rails, newel post, landing, headroom, winder
13TH	1st	Types of staircase (On the basis of shape): 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	Building Finishes 13(p) Floors and Roofs: Types of Floor Finishes and its suitability- Kota, Marble, Granite, Ceramic Tiles,
14TH	1st	Vitrified, Chequered Tiles, Paver Blocks, Concrete Floors, wooden Flooring, Skirting and Dado.
	2nd	Process of Laying and Construction, Finishing and Polishing of Floors,
	3rd	Roofing Materials- RCC, Mangalore Tiles, AC Sheets, G.I. sheets, Corrugated G.I. Sheets,
15TH	1st	Plastic and Fibre Sheets. Types of Roof: Flat roof, Pitched Roof- King Post truss,
	2nd	Queen Post Truss, terms used in roofs.
16TH	1st	Wall Finishes: Plastering – Necessity of Plastering, Procedure of Plastering,
	2nd	Single Coat Plaster, Double Coat Plaster, Rough finish, Neeru Finishing and Plaster of Paris (POP).
	3rd	Special Plasters- Stucco plaster, sponge finish, pebble finish.
17TH	1st	Plaster Board and Wall Claddings. Precautions to be taken in plastering,
	2nd	defects in plastering. Painting – Necessity,
	3rd	Types of painting and procedure of Painting. Painting –Necessity,
18TH	1st	Surface Preparation for painting, Methods of Application.
	2nd	Revision
	3rd	Revision


22/06/26
Signature of Faculty:


22/06/26
Signature of HOD