

Legends :- High:03, Medium:02, Low:01, No Mapping: - \*PSOs are to be formulated at institute level

# Maharashtra State Board of Technical Education

**K-1**

## Teaching Plan (TP)

**Academic Year:** 2025-26

**Institute Code:** 61303

**Program:** Civil Engineering

**Course Code:** 312338

**Course:** Building Material And Construction (BMC)

**Semester:** Second (CE-2K)

**Name of faculty:** Miss. Potfode A.D

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Unit No. (Allocated Hrs.)	CO	TL O	Unit Name and Learning Content Title / Details	No. of Lecture	Plan (From-To)	Actual Execution (From-To)	Teaching method/ Media	Remark
I (7 Hrs)	CO 1		<b>Unit - I Overview of construction Materials</b>					
		TL O 1.1	1.1 Scope of construction materials in various Civil Engineering Sectors.	01	15/12/2025			
		TL O 1.2	1.2 Broad classification of materials – Sources of materials, Natural, Artificial-special, finishing and recycled.	01	16/12/2025			
		TL O 1.3	1.3 Natural Building construction Materials – Stone, Timber, Soil, Sand and Coarse Aggregates, Bitumen: Types and uses. (IKS-Materials used in Ancient Buildings-Stone , Lime)	02	19/12/2025 22/12/2025			
		TL O 1.4	1.4 Artificial Building Construction Materials – Cement, Clay Brick, Flooring Tiles, Concrete Blocks, Plywood, particle board, Veneers, laminated board and Glass: Types and uses.	02	23/12/2025 26/12/2025			
		TL O 1.5	1.5 Introduction to National Building Code-Part III (2005) Group A to I As per Types of Constructions- Load Bearing Structures, Framed Structures, Composite Structures.	01	29/12/2025			
II (6 Hrs)	CO 2		<b>Unit - II Special Purpose Building Construction Materials</b>					
		TL O 2.1	2.1 Special Building Construction Materials – Waterproofing, Termite proofing, Thermal and sound insulating: Types and suitability.	02	30/12/2025 05/01/2026			
		TL O 2.2	2.2 Fibers– Jute, Glass, Plastic Asbestos Fibers: Types and uses	02	06/01/2026 09/01/2026			
		TL O 2.3	2.3 Geopolymer cement: Geo-cement: properties and applications	02	12/01/2026 13/01/2026			
			<b>Unit - III Construction of substructure &amp; Superstructure</b>					

<i>Unit No. (Allocated Hrs.)</i>	<i>CO</i>	<i>TL O</i>	<i>Unit Name and Learning Content Title / Details</i>	<i>No. of Lecture</i>	<i>Plan (From-To)</i>	<i>Actual Execution (From-To)</i>	<i>Teaching method/ Media</i>	<i>Remark</i>
III (14 Hrs)	CO 3	TL O 3.1	3.1 Building Components: Building Components & their Function: Substructure, Superstructure	01	16/01/2026			
		TL O 3.2	3.2 Earthwork: Excavation For Foundation, Timbering and Strutting Earthwork for Embankment Material for Plinth Filling	02	19/01/2026 20/01/2026			
		TL O 3.3	3.3 Formwork: Definition, Requirements, Materials used, Types and Removal of Formwork.	01	23/01/2026			
		TL O 3.4	3.4 Foundation: Functions, Types :Shallow Foundation-Stepped Footing, Wall Footing, Column Footing, Isolated and Combined Column Footing, Raft Foundation. Deep Foundation-Pile Foundation, Well foundation and Caissons, Pumping Methods of Dewatering, Deep wells, Cofferdams.	03	27/01/2026 30/01/2026 02/02/2026			
		TL O 3.5	3.5 Stone Masonry: Terms used in stone masonry- facing, backing, hearting, through stone, corner stone, cornice. Type of stone masonry: Rubble masonry, Ashlar Masonry and their types. Selection of Stone Masonry. Precautions to be observed in Stone Masonry Construction. (IKS- Ancient heritage building-stone masonry work)	03	03/02/2026 06/02/2026 09/02/2026			
		TL O 3.6	3.6 Brick masonry: Terms used in brick masonry- header, stretcher, closer, quoins, course, face, back, hearting, bat bond, joints, lap, frog, line, level and plumb. Bonds in brick masonry- header bond, stretcher bond, English bond and Flemish bond. Requirements of good brick masonry. Precautions to be observed in Brick Masonry Construction ,Comparison between stone masonry and Brick Masonry, Tools and plants required for construction of stone masonry and brick masonry.	03	10/02/2026 13/02/2026 16/02/2026			
		TL O 3.7	3.7 Scaffolding , Shoring and Underpinning: Necessity, types, application. Process of Erection and Dismantling.	01	17/02/2026			
			<b>Unit - IV Building Communication</b>					

<i>Unit No. (Allocated Hrs.)</i>	<i>CO</i>	<i>TL O</i>	<i>Unit Name and Learning Content Title / Details</i>	<i>No. of Lecture</i>	<i>Plan (From-To)</i>	<i>Actual Execution (From-To)</i>	<i>Teaching method/ Media</i>	<i>Remark</i>
IV (12 Hrs )	CO 4	TL O 4.1	4.1 Horizontal Communication: Doors – Components of Doors, Types of Doors: Fully Paneled Doors, Partly Paneled and Glazed Doors, Flush Doors, Collapsible Doors, Rolling Shutters, Revolving Doors, Glazed Doors. Sizes of Door recommended by BIS.	04	20/02/2026 23/02/2026 24/02/2026 27/02/2026			
		TL O 4.2	4.2 Windows: Component of windows, Types of Windows: Fully Paneled, Partly Paneled and Glazed, Wooden, Steel, Aluminum Windows, Sliding Windows .Sizes of Windows recommended by BIS and Ventilators	03	02/03/2026 06/03/2026 09/03/2026			
		TL O 4.3	4.3 Fixtures and fastenings for doors and windows.	01	10/03/2026			
		TL O 4.4	4.4 Vertical Communication - Stair Case, Ramps, Lift, Elevator and Escalators. Terms used in staircase, Types of staircases- Straight, doglegged, open well, Circular, Quarter turn. Calculation of no of flight/s, dimensions of rise and trade.	04	13/03/2026 16/03/2026 17/03/2026 20/03/2026			
V (6 Hrs )	CO 5		<b>Unit - V Building Finishes</b>					
		TL O 5.1	5.1 Types of Floor Finishes, laying process and its suitability- Shahabad, Kota, Marble, Granite, Kadappa, Ceramic Tiles, Vitrified, Pavement Blocks, Concrete Floors, wooden Flooring, Skirting And Dado.	03	23/03/2026 24/03/2026 27/03/2026			
		TL O 5.2	5.2 Plastering – Necessity, Procedure, Single Coat and Double Coat Plaster, rough finish, Neeru Finishing and POP.	02	30/03/2026 06/04/2026			
		TL O 5.3	5.3 Special Plasters- Stucco Plaster, sponge finish, pebble finish. Plaster Board And Wall Claddings.	02	07/04/2026 10/04/2026			
		TL O 5.4	5.4 Painting –Necessity, Surface Preparation for painting, Methods of Application, Selecting Suitable Painting Material.	02	13/04/2026 17/04/2026			

## **X. ASSESSMENT METHODOLOGIES/TOOLS**

### **➤ Formative assessment (Assessment for Learning)**

- Tests
- Rubrics for COs Assignment
- Midterm Exam
- Self-learning
- Term Work
- Seminar/Presentation

### **➤ Summative Assessment (Assessment of Learning)**

- End Term Exam Theory
- Micro-project
- Tutorial Performance

**Prof. A.D. Potfode**  
(Name & Signature of Staff)

**Prof. A.D. Potfode**  
(Name & Signature of HOD)