

Maharashtra State Board of Technical Education, Mumbai

TEACHING PLAN (TP)

Academic Year: 2025-26 (ODD)

Institute Code and Name: 61303- PPCOE, Karjat

Programme and Code: Civil Engineering (CE)

Course Code: 312338

Name of Faculty: Prof..Potfode A.D.

Semester: Second

Course and Code: BMC

Scheme: K

Class: CE2K

COURSE LEVEL LEARNING OUTCOMES (COS)

- CO1 - Identify relevant type of construction materials for the given type of building.
 - CO2 - Use the relevant type of special purpose construction materials in the given situation.
 - CO3 - Undertake the given type of building construction activity for the given component of building structure.
 - CO4 - Design the relevant means of communication for the given building structure.
 - CO5 - Use the relevant type of material for finishing purpose in the given situation.

TEACHING-LEARNING & ASSESSMENT SCHEME

Course Code	Course Title	Abbr	Course Category	Learning Scheme			Credits	Paper Duration	Assessment Scheme								Total Marks				
				Actual Contact Hrs/Week					Theory		Based on LL & TSL Practical				Based on SL						
				SLH	NLH	FA-TH			SA--TH	Total		FA-PR	SA-PR		SLA						
				C	L	T	L	L	Max	Max	Max	Min	Max	Min	Max	Min					
312338	Building Material And Construction	BMC	DSC	3	-	2	3	8	4	3	30	70	100	40	25	10	-	-	25	10	150

Total IKS Hrs for Sem.: 6 Hrs

Abbreviations: CL- Classroom Learning , TL- Tutorial Learning, LL-Laboratory Learning, SLH-Self Learning Hours, NLH-Notional Learning Hours, FA - Formative Assessment, SA -Summative assessment, IKS - Indian Knowledge System, SLA - Self Learning Assessment Legends: @ Internal Assessment, # External Assessment, *# On Line Examination . @\$ Internal Online Examination

SUGGESTED COS - POS MATRIX FORM

Course Outcomes (COs)	Programme Outcomes (POs)							Programme Specific Outcomes (PSOs)		
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability and Environment	PO-6 Project Management	PO-7 Life Long Learning	PSO- 1	PSO- 2	PSO- 3
CO1	2	1	-	1	1	1	1			
CO2	2	1	-	1	2	1	1			
CO3	3	2	1	2	2	1	2			
CO4	3	1	1	2	2	1	2			
CO5	3	2	1	2	1	1	2			

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

Program: Civil Engineering

Course: Building Material And Construction (BMC)

Name of faculty: Miss. Potfode A.D

Institute Code: 61303

Course Code: 312338

Semester: Second (CE-2K)

<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>
<i>I (7 Hrs)</i>	<i>CO 1</i>		Unit - I Overview of construction Materials					
		<i>TL O 1.1</i>	1.1 Scope of construction materials in various Civil Engineering Sectors.	01	15/12/2025			
		<i>TL O 1.2</i>	1.2 Broad classification of materials – Sources of materials, Natural, Artificial-special, finishing and recycled.	01	16/12/2025			
		<i>TL O 1.3</i>	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			
		<i>TL O 1.4</i>	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			
		<i>TL O 1.5</i>	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			
<i>II (6 Hrs)</i>	<i>CO 2</i>		Unit - II Special Purpose Building Construction Materials					
		<i>TL O 2.1</i>	2.1 Special Building Construction Materials – Waterproofing, Termite proofing, Thermal and sound insulating: Types and suitability.	02	30/12/2025 05/01/2026			
		<i>TL O 2.2</i>	2.2 Fibers– Jute, Glass, Plastic Asbestos Fibers: Types and uses	02	06/01/2026 09/01/2026			
		<i>TL O 2.3</i>	2.3 Geopolymer cement: Geo-cement: properties and applications	02	12/01/2026 13/01/2026			
			Unit - III Construction of substructure & Superstructure					

<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	<i>TL O 3.1</i>	3.1 Building Components: Building Components & their Function: Substructure, Superstructure	01	16/01/2026			
		<i>TL O 3.2</i>	3.2 Earthwork: Excavation For Foundation, Timbering and Strutting Earthwork for Embankment Material for Plinth Filling	02	19/01/2026 20/01/2026			
		<i>TL O 3.3</i>	3.3 Formwork: Definition, Requirements, Materials used, Types and Removal of Formwork.	01	23/01/2026			
		<i>TL O 3.4</i>	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			
		<i>TL O 3.5</i>	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			
		<i>TL O 3.6</i>	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			
		<i>TL O 3.7</i>	3.7 Scaffolding , Shoring and Underpinning: Necessity, types, application. Process of Erection and Dismantling.	01	17/02/2026			
		Unit - IV Building Communication						

<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	<i>TL O 4.1</i>	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			
		<i>TL O 4.2</i>	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			
		<i>TL O 4.3</i>	4.3 Fixtures and fastenings for doors and windows.	01	10/03/2026			
		<i>TL O 4.4</i>	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	Unit - V Building Finishes						
		<i>TL O 5.1</i>	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			
		<i>TL O 5.2</i>	5.2 Plastering – Necessity, Procedure, Single Coat and Double Coat Plaster, rough finish, Neeru Finishing and POP.	02	30/03/2026 06/04/2026			
		<i>TL O 5.3</i>	5.3 Special Plasters- Stucco Plaster, sponge finish, pebble finish. Plaster Board And Wall Claddings.	02	07/04/2026 10/04/2026			
		<i>TL O 5.4</i>	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)