LESSON PLAN OF **CEPC217 PR:4 Building Materials & Construction Lab.** FOR THE SESSION 2025-26 (UPTO 2025) BATCH-2024-27, GOVT.POLYTECHNIC,KANDHAMAL

Discipline: **civil engineering**	Semester: **3rd**	**Name of the Teaching Faculty:** Rahul kumar rout, Lect. stage 1 in Cvil Engg. Rajkumar Halba, Lect. stage-I (Civil Engg.)
Subject: **CEPC217 PR:4 Building Materials & Construction Lab.**	No. of days/ per week class allotted: **4**	Semester From Date : **14/07/2025** to Date: 15/11/2025 No. of Weeks: **15**

Week	Class Day	Theory/ Practical Topics (as per Blooms Taxonomy)
1st	1st	Identify various sizes of available coarse aggregates from sample of 10 kg in laboratory and prepare report (60,40, 20,10 mm)
	2nd	Identify various sizes of available coarse aggregates from sample of 10 kg in laboratory and prepare report (60,40, 20,10 mm)
	3rd	Identify various sizes of available coarse aggregates from sample of 10 kg in laboratory and prepare report (60,40, 20,10 mm)
	4th	Identify various sizes of available coarse aggregates from sample of 10 kg in laboratory and prepare report (60,40, 20,10 mm)
2nd	1st	Identify various layers and types of soil in foundation pit by visiting at least 3 construction sites in different locations of city and prepare report consisting photographs and samples.
	2nd	Identify various layers and types of soil in foundation pit by visiting at least 3 construction sites in different locations of city and prepare report consisting photographs and samples.
	3rd	Identify various layers and types of soil in foundation pit by visiting at least 3 construction sites in different locations of city and prepare report consisting photographs and samples.
	4th	Identify various layers and types of soil in foundation pit by visiting at least 3 construction sites in different locations of city and prepare report consisting photographs and samples.
3rd	1st	Select first class, second class and third-class bricks from the stake of bricks and prepare report based on its
	2nd	Select first class, second class and third-class bricks from the stake of bricks and prepare report based on its properties.
	3rd	Select first class, second class and third-class bricks from the stake of bricks and prepare report based on its properties.
	4th	Select first class, second class and third-class bricks from the stake of bricks and prepare report based on its properties.
4th	1st	Measure dimensions of 10 bricks and find average dimension and weight. Perform field tests - dropping, striking and scratching by nail and correlate the results obtained.
	2nd	Measure dimensions of 10 bricks and find average dimension and weight. Perform field tests - dropping, striking and scratching by nail and correlate the results obtained.
	3rd	Measure dimensions of 10 bricks and find average dimension and weight. Perform field tests - dropping, striking and scratching by nail and correlate the results obtained.
	4th	Measure dimensions of 10 bricks and find average dimension and weight. Perform field tests - dropping, striking and scratching by nail and correlate the results obtained.
5th	1st	Identify different types of flooring tiles such as vitrified tiles, ceramic tiles, glazed tiles, mosaic tiles, anti-skid tiles, chequered tiles, paving blocks and prepare report about the specifications.
	2nd	Identify different types of flooring tiles such as vitrified tiles, ceramic tiles, glazed tiles, mosaic tiles, anti-skid tiles, chequered tiles, paving blocks and prepare report about the specifications.
	3rd	Identify different types of flooring tiles such as vitrified tiles, ceramic tiles, glazed tiles, mosaic tiles, anti-skid tiles, chequered tiles, paving blocks and prepare report about the specifications.
	4th	Identify different types of flooring tiles such as vitrified tiles, ceramic tiles, glazed tiles, mosaic tiles, anti-skid tiles, chequered tiles, paving blocks and prepare report about the specifications.
6th	1st	Apply two or more coats of selected paint on the prepared base of a given wall surface for the area of 1m x 1m using suitable brush/rollers adopting safe practices.
	2nd	Apply two or more coats of selected paint on the prepared base of a given wall surface for the area of 1m x 1m using suitable brush/rollers adopting safe practices.
	3rd	Apply two or more coats of selected paint on the prepared base of a given wall surface for the area of 1m x 1m using suitable brush/rollers adopting safe practices.
	4th	Apply two or more coats of selected paint on the prepared base of a given wall surface for the area of 1m x 1m using suitable brush/rollers adopting safe practices.

Govt. Polytechnic Kandhamal Dept. of Civil

Halba 11/07/25 (Lect. stage-I, Civil)

Rout 11/07/25 Lect Stage-I, Civil

7th	1st	Prepare the cement mortar of proportion 1:3 or 1:6 using cement and sand only.
	2nd	Prepare the cement mortar of proportion 1:3 or 1:6 using cement and sand only.
	3rd	Prepare the cement mortar of proportion 1:3 or 1:6 using cement and sand only.
	4th	Prepare the cement mortar of proportion 1:3 or 1:6 using cement and sand only.
8th	1st	Determine fineness of cement by Blaine's air permeability apparatus Or by sieving.
	2nd	Determine fineness of cement by Blaine's air permeability apparatus Or by sieving.
	3rd	Determine fineness of cement by Blaine's air permeability apparatus Or by sieving.
	4th	Determine fineness of cement by Blaine's air permeability apparatus Or by sieving.
9th	1st	Determine specific gravity, standard consistency, initial and final setting times of cement.
	2nd	Determine specific gravity, standard consistency, initial and final setting times of cement.
	3rd	Determine specific gravity, standard consistency, initial and final setting times of cement.
	4th	Determine specific gravity, standard consistency, initial and final setting times of cement.
10th	1st	Determine compressive strength of cement.
	2nd	Determine compressive strength of cement.
	3rd	Determine compressive strength of cement.
	4th	Determine compressive strength of cement.
11th	1st	Determine bulking of sand.
	2nd	Determine bulking of sand.
	3rd	Determine bulking of sand.
	4th	Determine bulking of sand.
12th	1st	Determine bulk density of fine and coarse aggregates.Determine water absorption of fine and coarse
	2nd	Determine bulk density of fine and coarse aggregates.Determine water absorption of fine and coarse
	3rd	Determine bulk density of fine and coarse aggregates.Determine water absorption of fine and coarse aggregates
	4th	Determine bulk density of fine and coarse aggregates.Determine water absorption of fine and coarse aggregates
13th	1st	Determine Fineness modulus of fine aggregate by sieve analysis.Determine workability of concrete by slump cone test.
	2nd	Determine Fineness modulus of fine aggregate by sieve analysis.Determine workability of concrete by slump cone test.
	3rd	Determine Fineness modulus of fine aggregate by sieve analysis.Determine workability of concrete by slump cone test.
	4th	Determine Fineness modulus of fine aggregate by sieve analysis.Determine workability of concrete by slump cone test.
14th	1st	Determine workability of concrete by compaction factor test.
	2nd	Determine workability of concrete by compaction factor test.
	3rd	Determine workability of concrete by compaction factor test.
	4th	Determine workability of concrete by compaction factor test.
15th	1st	To prepare concrete mix of a particular grade as per IS 10262:2019 and determine compressive strength of Concrete for 7 and 28 days.Demonstration of NDT equipment
	2nd	To prepare concrete mix of a particular grade as per IS 10262:2019 and determine compressive strength of Concrete for 7 and 28 days.Demonstration of NDT equipment
	3rd	To prepare concrete mix of a particular grade as per IS 10262:2019 and determine compressive strength of Concrete for 7 and 28 days.Demonstration of NDT equipment
	4th	To prepare concrete mix of a particular grade as per IS 10262:2019 and determine compressive strength of Concrete for 7 and 28 days.Demonstration of NDT equipment

14/07/2025

H.O.D
Dept. of Civil Engg.
Govt. Polytechnic
Kandhamal

11/07/25
(Lect. stage-I, Civil)