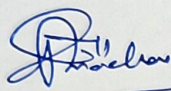
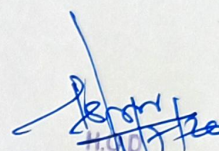


LESSON PLAN OF CEPC217 PR:4 Building Materials & Construction Lab. FOR THE SESSION 2026-27(WINTER-2026) BATCH-2025-28, GOVT.POLYTECHNIC,KANDHAMAL

Discipline: civil engineering	Semester: 3rd	Name of the Teaching Faculty: Gouranga Charan Pradhan, Sr. Lect. in Civil Engg. Subrat Kumar Behera, LAB Asst. in Civil Engg.
Subject: CEPC217 PR:4 Building Materials & Construction Lab.	No. of days/ per week class allotted: 4	Semester From Date : 1/07/2026 to Date: 5/11/2026 No. of Weeks: 15
Week	Class Day	Theory/ Practical Topics
1st	1st	Introduction to laboratory, safety rules, equipment-Understand laboratory safety and practices
	2nd	Identification of coarse aggregate sizes (60, 40, 20, 10 mm)-Identify aggregate sizes
	3rd	Report preparation on coarse aggregates-Prepare laboratory report
	4th	Introduction to soil identification and field visit planning-Understand objectives of field visit
2nd	1st	Construction Site Visit-1: Soil layer identification-Identify soil layers
	2nd	Construction Site Visit-1: Sample collection-Collect soil samples
	3rd	Construction Site Visit-2: Soil layer identification-Compare soil strata
	4th	Construction Site Visit-2: Sample collection-Collect soil samples
3rd	1st	Construction Site Visit-3: Soil layer identification-Observe foundation soil
	2nd	Construction Site Visit-3: Sample collection-Collect soil samples
	3rd	Soil sample observation and classification-Identify soil types
	4th	Soil report preparation with photographs-Prepare field report
4th	1st	Identification of first-, second- and third-class bricks-Classify bricks
	2nd	Report preparation on bricks-Prepare report
	3rd	Measurement of dimensions of 10 bricks-Measure dimensions accurately
	4th	Average dimensions and weight calculation-Calculate averages
5th	1st	Brick field tests: Dropping test-Assess quality
	2nd	Brick field tests: Striking and scratching tests-Evaluate brick quality
	3rd	Report preparation on brick testing-Correlate test results
	4th	Identification of vitrified and ceramic tiles-Identify flooring materials
6th	1st	Identification of glazed and mosaic tiles-Distinguish tile types
	2nd	Identification of anti-skid, chequered tiles and paving blocks-Identify special flooring materials
	3rd	Report preparation on flooring tiles-Prepare specifications report
	4th	Surface preparation for painting-Prepare wall surface
7th	1st	First coat of paint application-Apply paint safely
	2nd	Second coat of paint application-Finish painted surface
	3rd	Preparation of cement mortar (1:3)-Prepare mortar mix
	4th	Preparation of cement mortar (1:6)-Prepare mortar mix
8th	1st	Fineness of cement by sieve analysis-Determine fineness
	2nd	Fineness by Blaine's apparatus (Demonstration)-Understand Blaine method
	3rd	Specific gravity of cement-Determine specific gravity
	4th	Standard consistency of cement-Determine consistency
9th	1st	Initial setting time of cement-Determine initial setting
	2nd	Final setting time of cement-Determine final setting
	3rd	Compressive strength of cement specimen preparation-Prepare specimens
	4th	Compressive strength testing of cement-Determine strength
10th	1st	Bulking of sand-Determine bulking
	2nd	Bulk density of fine aggregate-Determine bulk density
	3rd	Bulk density of coarse aggregate-Determine bulk density
	4th	Water absorption of fine aggregate-Determine water absorption
11th	1st	Water absorption of coarse aggregate-Determine water absorption
	2nd	Sieve analysis of fine aggregate-Perform sieve analysis
	3rd	Calculation of fineness modulus-Determine fineness modulus
	4th	Concrete workability: Slump cone test-Determine workability
12th	1st	Concrete workability: Compaction factor test-Determine workability
	2nd	Introduction to concrete mix design (IS 10262:2019)-Understand mix design
	3rd	Concrete mix calculations-Calculate material quantities

	4th	Batching and mixing of concrete-Prepare concrete
13th	1st	Casting concrete cubes-Cast test specimens
	2nd	Curing of concrete cubes-Learn curing process
	3rd	7-day compressive strength testing-Determine early strength
	4th	Discussion on 7-day test results-Interpret results
14th	1st	28-day compressive strength testing (Demonstration/Data analysis)-Evaluate concrete strength
	2nd	Interpretation of concrete strength results-Analyze results
	3rd	Demonstration of NDT equipment – Rebound Hammer-Understand NDT
	4th	Demonstration of NDT equipment – Ultrasonic Pulse Velocity (UPV)-Understand UPV testing
15th	1st	Laboratory record completion-Complete practical records
	2nd	Report submission and correction-Improve documentation
	3rd	Practical revision and viva voce-Assess practical knowledge
	4th	Practical examination/assessment-Evaluate course outcomes


26/06/2026
 8th. Lect. in
 Civil Engg


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