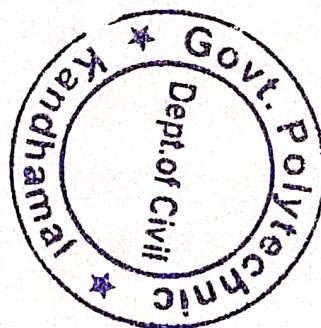


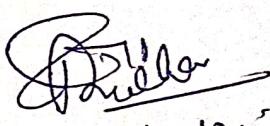


*** LESSON PLAN: TH-3.Estimating, Costing & Valuation, SESSION -2025-2026 (SUMMER 2026) BATCH-2024-2027**
(4th Semester)

Discipline: civil engineering	Semester: 4th	Name of the Teaching Faculty: GOURANG CHARAN PRADHAN, Sr.Lect. In civil Engg.
Subject: TH.3-Estimating, Costing & Valuation	No. of days/ per week class allotted: 3	Semester From Date : 22-12-2025 to Date: 18-04-2026 No. of Weeks: 15
Week		Theory/ Practical Topics
		UNIT –I Fundamentals of Estimating and Costing
1ST	1	Estimating and Costing – Meaning, purpose and importance
	2	Administrative Approval and Technical Sanction
	3	Types of Estimates – Approximate and Detailed Estimate
2ND	1	Roles and responsibilities of Engineers; Administrative setup and hierarchy of Engineering Departments in State Govt., Central Govt. and PSUs
	2	Standard formats of Measurement Sheet and Abstract Sheet
	3	Modes of measurement and desired accuracy for different items of work as per IS:1200
3RD	1	Rules for deduction in different categories of work as per IS:1200
	2	Description / specifications of items of building work as per OPWD / CPWD / DSR / Railways
	3	UNIT –II Detailed Estimate
4TH	1	Introduction to Detailed Estimate: Definition, Purpose
	2	Data Required for Detailed Estimate: Civil cost, GST, Contingencies, Supervision charges
	3	Procedure for Preparation of Detailed Estimate
5TH	1	Methods of Measurement: Long Wall & Short Wall Method, Centre Line Method
	2	Methods of Measurement: Long Wall & Short Wall Method, Centre Line Method
	3	Bar Bending Schedule (BBS): Footing, Column, Beam, Lintel, Chajja, Slab
6TH	1	Bar Bending Schedule (BBS): Footing, Column, Beam, Lintel, Chajja, Slab
	2	Provisions in Detailed Estimate: Contingencies, Work Charged Establishment, Percentage Charges, Water Supply & Sanitary Charges, Electrification Charges
	3	Prime Cost, Provisional Sum, Provisional Quantities
7TH	1	Bill of Quantities (BOQ) and Spot / Site Items
	2	Detailed Estimate of Residential Building: Using Long Wall – Short Wall Method
	3	Detailed Estimate of Residential Building: Using Long Wall – Short Wall Method
8TH	1	Detailed Estimate of Residential Building: Using Centre Line Method
	2	Detailed Estimate of Residential Building: Using Centre Line Method
	3	UNIT –III Estimate for Civil Engineering Works
9TH	1	Introduction to Estimation in Civil Engineering Works
	2	Earthwork Estimation: Overview & Methods
	3	Earthwork: Mid Sectional Area Method & Mean Sectional Area Method
10TH	1	Earthwork: Prismoidal Formula & Trapezoidal Formula Method
	2	Detailed Estimate of Septic Tank
	3	Estimate of RCC Culvert
11TH	1	Estimate of Drainage Syphon
	2	Estimate of Vertical Fall
	3	Estimate of Bituminous Road
12TH	1	Estimate of Bituminous Road

	2	Review, Integration & Assessment
UNIT –IV Rate Analysis		
	3	Introduction to Rate Analysis: Definition, Purpose, Importance
13TH	1	Components of Rate Analysis: Lead (Standard & Extra), Lift, Overhead Charges, Water Charges, Contractors' Profit
	2	Procedure for Rate Analysis
	3	Task Work: Definition, Types
14TH	1	Task Work of Different Skilled Labour for Various Items
	2	Categories of Labor, Daily Wages, Types and Numbers for Different Items of Work
	3	Transportation Charges of Materials: Lead & Lift, Hire Charges of Machinery & Equipment
15TH	1	Preparing Rate Analysis for Building Items (PCC, Plastering, Flooring, Brick Work)
	2	Preparing Rate Analysis for Road Work Items
	3	Review and Assessment




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