

Branch Name:	Civil Engineering
Program Code:	ET106
Course Title:	Estimating, Costing and Valuation Practical
Course Code:	2ET1060703P
Pre-requisite Course:	Students should have basic knowledge of: Engineering Drawing (Civil): Ability to read and interpret building drawings, plans, sections, and elevations Building Materials & Construction: Understanding of materials (cement, steel, bricks, concrete) and construction practices Basic Mathematics: Skills in area, volume calculations, unit conversions, and simple arithmetic Surveying (Fundamentals): Basic concepts of measurements, leveling, and site layout Strength of Materials (Basic Concepts) (desirable): For understanding structural components like beams, slabs, and columns

Course Objectives:

After completion of course student will able to understand:

- To develop skills in **quantity estimation of civil engineering works**
- To understand **rate analysis and cost control mechanisms**
- To learn **specifications, tendering, and contract procedures**
- To apply **valuation techniques for land and buildings**

Teaching and Examination Scheme:

Credit	Teaching Scheme Hours per week				Evaluation Scheme (Marks)								
					Theory (Marks)				Practical (Marks)				Total (Marks)
	L	T	P	Total	SEE		CCA		SEE		CCA		
					Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
01	-	-	02	02	-	-	-	-	10	25	10	25	50

Practical work:

- [1] Quantity take-off from drawings
- [2] Detailed estimate of building
- [3] Rate analysis (minimum 5 items)
- [4] Bar bending schedule preparation
- [5] Valuation problems
- [6] Excel-based estimation

Text Books:

1. B. N. Dutta, Estimating and Costing In Civil Engineering, Ubs PublishersDistributors Ltd.
2. S. C. Rangwala, Estimating And Costing, Charotar Publishing House, Anand
3. S. C. Rangwala, Valuation of Real Properties, Charotar Publication.
4. M.Chakroborti, Estimating, Costing, Specification and Valuation.Calcutta.
5. G. S. Biridi, Textbook of Estimating & Costing, Dhanapat Rai & Sons. Delhi.
6. P.W.D. Handbook and SOR, IS Code – 1200.

Reference Books:

1. Patil, B.S., Civil Engineering Contracts, Vol. – I, Orient Longman Publication, 1998.
2. Aggarwal, A., Upadhyay, A.K., Civil Estimating, Costing & Valuation, S.K Kataria & Sons, New Delhi.
3. Chandola, S.P. and Vazirani, Estimating and Costing, Khanna Publication.

Course Learning Outcomes (CLO):

After successful completion of the course the students shall be able to:

CLO	Description	Bloom's Taxonomy Level
CLO1	Interpret drawings and apply standard methods of measurement (IS 1200) to compute quantities of civil engineering works.	L3
CLO2	Prepare detailed and approximate estimates for buildings and infrastructure projects using standard estimation techniques.	L3
CLO3	Analyze rates of construction items by considering material, labor, equipment, overheads, and profit.	L4
CLO4	Develop technical specifications and explain tendering and contract procedures used in construction projects.	L3, L2
CLO5	Evaluate the value of land and buildings using standard valuation methods and depreciation concepts.	L5
CLO6	Apply modern tools (e.g., Excel/software) and sustainable practices in estimation and costing.	L3

L1- Remember, L2- Understand, L3- Apply, L4- Analyze, L5- Evaluate, L6- Create

Mapping of CLOs with POs & PSOs

	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
Course Learning Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CLO1	H	M	-	-	-	-	-	-	-	-	-	-	H	-	-
CLO2	H	M	M	-	L	-	-	-	-	-	M	-	H	L	-
CLO3	M	H	-	-	-	-	-	-	-	-	H	-	M	-	-
CLO4	M	M	L	-	-	M	-	M	L	M	M	-	M	-	-
CLO5	M	M	-	-	-	L	-	M	-	-	H	-	M	-	-
CLO6	M	L	-	-	H	-	M	-	-	-	L	M	M	H	-

H: High, M: Medium, L: Low