

19CE3701 – ESTIMATION & COSTING

Course Category:	Program Core	Credits:	3
Course Type:	Theory	Lecture-Tutorial-Practical:	3-0-0
Prerequisites:	19CE3303 - Surveying 19CE3651 - Architectural planning & CAD Lab	Continuous Evaluation:	30
		Semester End Evaluation:	70
		Total Marks:	100

Course Outcomes

Upon successful completion of the course, the student will be able to:

CO1	Understand drawings, principles of different works in civil engineering, approximate methods of estimating and standard specifications for different items of works in buildings	K2
CO2	Prepare detailed estimates for buildings using a long wall short wall method and centre line method	K2
CO3	Develop the preparation of rate analysis for different works in civil engineering and understand the reinforcement bar bending schedules	K6
CO4	Understand procedures of contracts and valuation	K2
CO5	Calculate earthwork for roads & canals and prepare reports on estimates for the construction of buildings and roads.	K3

Contribution of Course Outcomes towards achievement of Program Outcomes

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3		1							1	2	1	3	2
CO2	3		1					1	2				3	2
CO3	3		1										3	2
CO4	3		1										3	2
CO5	3		1										3	2
Avg.	3		1					1	2	1	2	1	3	2
1- Low			2-Medium					3-High						

Course Content

UNIT-1	INTRODUCTION TO ESTIMATION General items of work in building – Principle of units for various items of works - working out quantities for detailed and abstract estimates – Approximate methods of estimating. STANDARD SPECIFICATIONS Standard specifications for different items of building construction.	CO1
UNIT-2	LONGWALL & SHORTWALL METHOD Detailed Estimates of Buildings using Long wall & short wall method. CENTRE LINE METHOD Detailed Estimates of Buildings using Centre line method.	CO2
UNIT-3	STEEL ESTIMATION Reinforcement bar bending and bar requirement schedules. RATE ANALYSIS Rate Analysis – Working out data for various items of work over head and contingent charges.	CO3
UNIT-4	CONTRACTS Contracts – Types of contracts – Contract Documents – Conditions of contract. VALUATION Valuation of buildings.	CO4
UNIT-5	EARTH WORK FOR ROADS AND CANALS	CO5

	Estimation of earthwork for roads and canals – Lead and Lift considerations	
	REPORTS	
	Reports on estimates for the construction of buildings and roads	
Learning Resources		
Text Books	<ol style="list-style-type: none"> 3. B.N.Dutta, Estimating and Costing, 28th edition, UBS Publishers' Distributors Pvt. Ltd, 2016. 4. G.S.Birdie, Estimating and Costing, 7th edition, Dhanpat Rai Publishing Company (P) Ltd, 2016. 	
Reference Books	<ol style="list-style-type: none"> 1. A.K.Upadhyay, Civil Estimating and Costing, S.K.Kataria & Sons., 2012. 2. D.D.Kohli, Estimating and Costing, S.Chand & Company Pvt Ltd, 2013. 	
e-Resources & other digital material	<ol style="list-style-type: none"> 1. https://www.services.bis.gov.in:8071/php/BIS/PublishStandards/published# 	