

B. Tech. Civil Engineering					
Course code: Course Title		Course Structure			Pre-Requisite
CE 323: Quantity Surveying and Estimation.		L	T	P	C
		3	1	0	4
		NIL			

<b>Course Objective:</b> To understand methods of quantity survey, estimation and specifications of materials, rate analysis as required in construction projects.
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S. No	Course Outcomes (CO)
CO1	Understand basic terms and the importance of estimation of quantity and cost.
CO2	Understand the technical specifications for various works to be performed for a project.
CO3	Understand methods of evaluating quantities of constituents, derive their cost rates and estimate the cost of the structure.
CO4	Understand how competitive bidding works and how to submit a competitive bid proposal.

S. No	Contents	Contact hours
UNIT 1	Introduction to estimation - Types of estimates- Necessity - Method of measurements – Specifications of construction materials.	10
UNIT 2	General items of work in construction projects – Standard units, Principles of working out quantities for detailed and abstract estimates – Methods of estimating. Detailed estimates of projects.	10
UNIT 3	Rate Analysis – Working out data for various items of work, overhead and contingency charges.	10
UNIT 4	Contracts – Types of contracts – Contract documents – Conditions of contract, Valuation – Standard specifications for different items of construction projects.	10
	<b>Total</b>	<b>40</b>

REFERENCES		
S. No.	Name of Books/Authors/Publishers	Year of Publication / Reprint

1	B.N. Dutta, “Estimating and Costing in Civil Engineering”, UBS Publishers.	2017
2	2. A.K. Upadhyay, “Civil Estimating and Costing”, S.K. Kataria and Sons Publishers.	2013
3	G.S. Birde, “Estimating and Costing”, Dhanpat Rai Publishing Company	2014
4	M. Chakraborty, “Estimating, Costing, Specifications and Valuation in Civil Engineering. Chakraborti Publication.	2006
5	Standard Schedule of Rates and Standard Data Book by the Public Works Department.	2018