



## JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA

**KAKINADA – 533 003, Andhra Pradesh, India**

**DEPARTMENT OF CIVIL ENGINEERING**

<b>III Year – II Semester</b>	<b>PROFESSIONAL CORE COURSE LAB</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
		<b>0</b>	<b>0</b>	<b>3</b>	<b>1.5</b>
<b>PC Lab- ESTIMATION, COSTING AND CONTRACTS LAB</b>					

### Course Learning Objectives:

The objective of this course is to enable the students to:

1. Understand the quantity calculations of different components of the buildings.
2. Understand the rate analysis of different quantities of the buildings components.
3. Learn various specifications and components of the buildings.

### Course Outcomes:

Upon the successful completion of this course:

- a. The student should be able to determine the quantities of different components of buildings.
- b. The student should be in a position to find the cost of various building components.
- c. The student should be capable of finalizing the value of structures.

### SYLLABUS:

#### UNIT – I

Contracts – Types of contracts – Contract Documents – Conditions of contract, Valuation of buildings- concepts of e-procurement and reverse auctions. Standard specifications for different items of building construction.

#### UNIT – II

General items of work in Building – Standard Units Principles of working out quantities for detailed and abstract estimates – Approximate method of Estimating.

#### UNIT – III

Rate Analysis – Working out data for various items of work over head and contingent charges.

Earthwork for roads and canals, Reinforcement bar bending and bar requirement schedules.

#### UNIT-IV

Detailed Estimation of Buildings using individual wall method for single, double and four roomed buildings.

#### UNIT -V

Detailed Estimation of Buildings using centre line method for single, double and four roomed buildings.

Standard software's like building estimator etc.

### TEXT BOOKS:

1. 'Estimating and Costing' by B.N. Dutta, UBS publishers, 2000.
2. 'Civil Engineering Contracts and Estimates' by B. S. Patil, Universities Press (India) Pvt. Ltd., Hyd.
3. 'Construction Planning and Technology' by Rajiv Gupta, CBS Publishers & Distributors Pvt. Ltd. New Delhi.
4. 'Estimating and Costing' by G.S. Birdie.

### REFERENCES:

1. 'Standard Schedule of rates and standard data book' by public works department.
2. IS 1200 (Parts I to XXV-1974/ Method of Measurement of Building & Civil Engg Works – B.I.S.)
3. 'Estimation, Costing and Specifications' by M. Chakraborti; Laxmi publications.
4. National Building Code