

<b>Course Title: QUANTITY SURVEYING AND CONTRACTS MANAGEMENT</b> <b>As per Choice Based Credit System (CBCS) scheme</b> <b>SEMESTER:VIII</b>			
<b>Subject Code</b>	<b>17CV81</b>	<b>IA Marks</b>	<b>40</b>
<b>Number of Lecture Hours/Week</b>	<b>04</b>	<b>Exam Marks</b>	<b>60</b>
<b>Total Number of Lecture Hours</b>	<b>50</b>	<b>Exam Hours</b>	<b>03</b>
<b>CREDITS -04</b>		<b>Total Marks- 100</b>	
<b>Course objectives:</b> This course will enable students to; 1. Estimate the quantities of work, develop the bill of quantities and arrive at the Cost of civil engineering Project 2. Understand and apply the concept of Valuation for Properties 3. Understand, Apply and Create the Tender and Contract document.			
<b>Module -1</b>			
Quantity Estimation for Building; study of various drawing attached with estimates, important terms, units of measurements, abstract, Types of estimates - Approximate, detailed, supplementary and revised, Estimation of building - Short wall and long wall method - centre line method. Estimate of R.C.C structures including Slab, beam, column, footings, with bar bending schedule.			
<b>L2,L3</b>			
<b>Module -2</b>			
Estimate of Steel truss, manhole and septic tanks. Quantity Estimation for Roads: Road estimation, earthwork fully in banking, cutting, partly cutting and partly Filling, Detailed estimate and cost analysis for roads.			
<b>L1,L2,L3</b>			
<b>Module -3</b>			
<b>Specification for Civil Engineering Works:</b> Objective of writing specifications essentials in specifications, general and detail specifications of different items of works in buildings, <b>Analysis of Rates :</b> Factors Affecting Cost of Civil Works , Concept of Direct Cost , Indirect Cost and Project Cost Rate analysis and preparation of bills, Data analysis of rates for various items of Works, Sub-structure components, Rate analysis for R.C.C. slabs, columns and beams.			
<b>L1,L2,L3</b>			
<b>Module-4</b>			
<b>Contract Management-Tender and its Process:</b> Invitation to tender, Prequalification, administrative approval & Technical sanction. Bid submission and Evaluation process. Contract Formulation: covering Award of contract, letter of intent, letter of acceptance and notice to proceed. Features / elements of standard Tender document (source: PWD / CPWD / International Competitive Bidding – NHAI / NHEPC / NPC). Law of Contract as per Indian Contract act 1872 , Types of Contract, Entire contract, Lump sum contract, Item rate, % rate, Cost plus with Target, Labour, EPC and BOT, Sub Contracting. Contract Forms : FIDIC contract Forms , CPWD , NHAI , NTPC , NHEPC			
<b>L1,L2,L3</b>			
<b>Module -5</b>			
<b>Contract Management-Post award :</b> Basic understanding on definitions, Performance security, Mobilization and equipment advances, Secured Advance, Suspension of work, Time limit for completion, Liquidated damages and bonus, measurement and payment, additions and alterations or variations and deviations, breach of contract, Escalation, settlement of account or final payment, claims, Delay's and Compensation, Disputes & its resolution mechanism, Contract management and administration <b>Valuation:</b> Definitions of terms used in valuation process, Cost, Estimate, Value and its relationship, Capitalized value. Concept of supply and demand in respect to properties ( land , building , facilities'), freehold and lease hold , Sinking fund, depreciation–methods of estimating depreciation, Outgoings, Process and methods of valuation : Rent fixation,			

valuation for mortgage, valuation of land.

**L1,L2,L3**

**Course outcomes:** After studying this course, students will be able to:

1. Prepare detailed and abstract estimates for roads and building.
2. Prepare valuation reports of buildings.
3. Interpret Contract documents of domestic and international construction works

**Program Objectives:**

- Engineering knowledge
- Problem analysis
- Interpretation of data

**Text Books:**

1. Datta B.N., "Estimating and costing", UBSPD Publishing House, New Delhi
2. B.S. Patil, "Civil Engineering Contracts and Estimates", Universities Press
3. M. Chakraborti; "Estimation, Costing and Specifications", Laxmi Publications
4. MORTH Specification for Roads and Bridge Works – IRC New Delhi

**Reference Books:**

1. Kohli D.D and Kohli R.C, "Estimating and Costing", 12th Edition, S.Chand Publishers, 2014.
2. Vazirani V.N and Chandola S.P, "Estimating and costing", Khanna Publishers, 2015.
3. Rangwala, C. "Estimating, Costing and Valuation", Charotar Publishing House Pvt. Ltd., 2015.
4. Duncan Cartlidge, "Quantity Surveyor's Pocket Book", Routledge Publishers, 2012.
5. Martin Brook, "Estimating and Tendering for Construction Work", Butterworth-Heinemann publishers, 2008.
6. Robert L Peurifoy, Garold D. Oberlender, "Estimating Construction Costs" – 5ed, Tata McGraw-Hill, New Delhi
7. David Pratt, "Fundamentals of Construction Estimating" – 3ed,
8. PWD Data Book, CPWD Schedule of Rates (SoR). and NH SoR – Karnataka
9. FIDIC Contract forms
10. B.S. Ramaswamy "Contracts and their Management" 3ed, Lexis Nexis (a division of Reed Elsevier India Pvt Ltd)