

Branch Name:	Civil Engineering
Semester/Year:	Semester VII/ Forth Year
Subject Title:	Professional Practice and Valuation
Subject Code:	1ET1060702
Pre-requisite:	To develop basic understanding of: 1) Estimated cost of a proposed civil engineering structure. 2) The value of any old or existing structure. 3) Rates of items of civil engineering works.

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture (L)	Tutorial (T)	Practical (P)	Credit	Theory (Marks)		Practical (Marks)		Total (Marks)
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
04	00	02	05	70	30	30	20	150

Subject Contents			
Sr. No	Topic	Total Hours	Weightage (%)
1.	<u>Introduction:</u> Definition, Purpose of estimating and valuation, Types of estimates.	02	05
2.	<u>Building Estimate:</u> Main items and their unit of measurement, methods of Measurement-Methods of estimating quantities, Estimating quantities of building. Estimation of quantity of load bearing structure with single room & two rooms, Estimation of quantity single storied residential building, Estimation of quantity Different R.C.C. structures, Estimation of quantity of water supply and sanitary works, Estimation of quantity of culverts and bridges, Road estimating, Estimation of quantity of Trusses. Introduction to estimates of other Civil engineering structures.	20	20
3.	<u>Specification:</u> Definition, Objectives and importance of specification, Types of specification, Care to be taken while drafting specifications, Drafting general specifications, and detailed specifications for various Civil work items.	04	10
4.	<u>Market Survey:</u> Market Survey- Traditional and modular materials, Market survey of materials of Construction, Wages of labour, Tools plant and equipment of construction.	02	05
5.	<u>Rate Analysis:</u> Definition, factors affecting rate analysis, over head expenses, procedure for rate analysis, schedule of rates, Task work: labour requirement for different works, material requirement for different works, Rate analysis of different Items of work.	08	15

6.	<u>Tenders and Contracts:</u> Tender- Definition, Types, Tender notice and its essential features, tender document, Analysis of tenders, Basis for evaluation and acceptance, letter of intent, work order, agreement. Contract- Definition, legal requirements of a valid contract ,types of contracts, conditions of contract, sub contracts and contractual disputes, Arbitration, Responsibility of owner, Architect, Contractor and Engineer	08	15
7.	<u>Abstracting, Billing & Book Keeping:</u> Purpose of abstract, preparation of abstract, measurement and billing, Checking of bills and final bill, Work abstract, material at site account, measurement book, muster role hiring and maintenance of equipment, record of bills, vouchers and receipt book	02	10
8.	<u>Valuation:</u> Definition, Purpose of valuation, types of property- Depreciation, Sinking fund, Lease hold and free hold property, obsolescence, Gross income, Outgoing and Net income, Capitalized value and year's purchase. Methods of valuation of buildings and typical problems.	10	20

Course Outcome:

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

- diverse knowledge of estimating, costing and professional practice, which will be useful in tackling real life problems.
- understand the procedure to carry out the estimation and steps to prepare reports of construction works.
- learn the purpose and importance of valuation

Practical work:

The students will have to prepare at least one estimating & costing of residential building and should have to prepare one tender notice and valuation of one existing building.

List of 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.

List of 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.

E-Resources (If any):

<http://nptel.ac.in/>