School of Planning and Architecture: Vijayawada
(An institution of National Importance under the Ministry of Education, Govt. of India)
Survey No.4/4, ITI Road, Vijayawada-520008, Andhra Pradesh, India

Department of Architecture

Course: **ARC 325; Estimation, Costing and Specifications** **Class:** III Yr B.Arch V Sem A.Y. 2023-24
Instructors: Dr. P. Siva Prasad **Internal Assessment:** 50
External Theory Exam: 50
Contact Periods/ week: 04 periods (55 min each) **Total Marks:** 100
Time Table: **Credits:** 4
Attendance: Min 75% **Min. Passing Marks:** 50% each in Internal & External Assessment, 50% in Aggregate

Objective: This course is intended to impart students with the necessary technical Knowledge for preparation of Specifications and calculating estimates and detailed costing for small to medium scale projects.

Out Line of the Course:

LECTURE PLAN

WEEK	DATE	TOPIC OF CLASS LECTURE & DISCUSSION	TOPIC OF STUDIO WORK& ASSIGNMENTS / REMARKS
1	Week-1	Definition, importance and purpose of specifications, impact on costing.	Lecture, Discussion & Tutorial/Studio
2	Week-2	Principles and practices. Types of specifications. Knowledge of manufacturers' specifications for construction materials/products. Specification of common building materials including carriage & stacking of materials.	Lecture, Discussion & Tutorial/Studio
3	Week-3	Specifications for a site preparation like electric, plumbing and water supply services for medium scale projects. Specifications for a contemporary building (Residential). Standard specifications of BIS,CPWD etc., General abbreviations used in specifications.	Lecture, Discussion & Tutorial/Studio
4	Week-4	Introduction to the construction Process from site preparation to final finishing of contemporary building types of small and medium scale projects.	Lecture, Discussion & Tutorial/Studio
5	Week-5	Definition of estimation Purpose of estimation and costing, Procedure of estimating or method of estimating, data required to prepare an estimate (Drawings/specification/ rates), complete estimation of a structure.	Lecture, Discussion & Tutorial/Studio
6	Week-6	Measurement of various construction work items, importance and significance in construction projects i.e., Units of measurement, rules for measurement.	Lecture, Discussion & Tutorial/Studio
7	Week-7	**Mid-Semester examination**	**Mid-semester examination**

8	Week-8	Methods of taking out quantities- Long wall and short wall method and centre line method.	Lecture, Discussion & Tutorial/Studio
9	Week-9	Preliminary/Approximate Quantity Estimates: Importance & purpose, Plinth area method, Cubical contents method.	Lecture, Discussion & Tutorial/Studio
10	Week-10	Types of approximate estimates, basic differences and advantages.	Lecture, Discussion & Tutorial/Studio
11	Week-11	Detailed Quantity Estimation: Types of detailed estimates and their application.	Lecture, Discussion & Tutorial/Studio
12	Week-12	Preparation of Detailed estimate, Work items as per construction stages: Foundations, Superstructure, Finishing works in a simple building.	Lecture, Discussion & Tutorial/Studio
13	Week-13	Description & significance of Items in Bill-of Quantities (BOQ).	Lecture, Discussion & Tutorial/Studio
14	Week-14	Standard modes of measurement as per Indian Standards for various work items.	Lecture, Discussion & Tutorial/Studio
15	Week-15	Meaning, purpose, methods of estimating cost of construction for various work items, analysis of rates - labour and material, cost indices, preparation of abstract of estimated cost, use of CPWD schedule of rates and State Scheduled Rtes. Deriving construction cost as per BOQ.	Lecture, Discussion & Tutorial/Studio

S. No.	Stages of Evaluation	Weightage
1	First stage: Assessment –1	15
2	Second stage: Mid-semester Examination	20
3	Third stage: Assessment –3	15
	Total	50

Reference Books:

1. Birdie, G. S. (2005). Text Book of Estimating and Costing. Dhanpat Rai Publishing.
2. Chakraborty, M. Estimating, Costing, Specification & Valuation
3. C.P.W.D. Standard Schedule of Rates.
4. Dutta, B. N. (1998). Estimating and Costing in Civil Engineering. 24th Ed. UBS Publishers
5. Distributors Ltd.(New Edition)
6. 4.Jagannathan G(1992), Getting more at less cost – The Value Engineering Way, Tata McGraw Hill, New Delhi.
7. Kohli, D.D and Kohli, R.C.(2004), "A Text Book of Estimating and Costing (Civil)", S.Chand & Company Ltd.

Course Instructors:

sd/-

(Dr. P. Siva Prasad)

Head of Department:

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