



GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Diploma of Vocation (D.Voc), 5th Semester

Branch: Architecture Assistantship

Subject Name: Estimating and Costing

Subject Code: 1250604

Type of course: Core

Focus:

To develop the necessary skills for estimation and writing specifications for various types of buildings and developmental work, to achieve the best in terms of cost efficiency and standards.

Teaching and Examination Scheme:

Teaching Scheme			Credit	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
			ESE (E)	PA (M)	ESE (V)	PA (I)		
3	0	0	3	50	0	0	0	50

L- Lectures; T- Tutorial/Teacher Guided Student Activity; P- Practical; C- Credit; ESE- End Semester Examination; PA- Progressive Assessment

Content:

Sr No.	Contents:	Hrs.	Module % Weightage
1	<ul style="list-style-type: none">Introduction, importance of estimation, types of estimates – approximate and actual, mode of measurement etc.Study of market rates of building materials, sanitary wares, fixtures, finishing materials, measurement book (MB), RA bill.	8	15
2	<ul style="list-style-type: none">Proportion of various materials (concrete, plaster, paint) used in building and rate analysis of items like concrete M20 grade, plaster 1:6, brick masonry 9” thick.	9	25
3	<ul style="list-style-type: none">Abstract and detailed specifications for items of work used in building – excavation, brick masonry, RCC work, Plaster.	8	15
4	<ul style="list-style-type: none">Estimation of Load bearing and RCC framed structure with one example for each (one room).	9	30
5	<ul style="list-style-type: none">Introduction to types of contracts – lumpsum contract, area rate contract (plinth area and slab area) item rate contract and tender.	8	15
	Total	42	100

Reference:

- Dutta B.N.-Estimation & Valuation
- Chakravarti.- Estimation & Valuation
- Rangwala.-Estimation & Valuation
- Rangwala.-Quantity Surveying



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Suggested Specification table with Marks (Theory):

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
5	10	15	5	5	10

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create and above levels (Bloom's Taxonomy)

Course Outcomes:

Sr No	CO Statement	Marks % weightage
1	To develop the necessary skills for estimation and writing specifications for various types of buildings and developmental work.	20
2	To know the market trends for the better execution of work on site.	20
3	To achieve the best in terms of cost efficiency and standards.	20
4	To develop an ability to calculate the amount of materials required at various stages, overall cost of the project.	20
5	To develop understanding of tender and contract issued for construction work.	20

Projects:

Market rate for various items.

Estimate the quantities for own house, load bearing and RCC framed structure as practice.

Evaluate the rate analysis and estimate the quantities use.

Method:

Study through practical site visits, presentations, case studies, tutorial, study of BOQ & workshop based on the application of theory to the construction field.

Laboratory Work:

Tutorials on small scale buildings.