

Effective from Session: 2017-2018														
Course Code	DAR - 501	Title of the Course	ESTIMATION AND COSTING - I	L	Т	Р	С							
Year	III	Semester	V	3	1	0								
Pre-Requisite	-	Co-requisite	-											
Course Objectives	• To initiate the students into theory and practice of estimating and quantity surveying.													
	 To inculcate awaren 	ess regarding factors eff	fecting cost of buildings.		• To inculcate awareness regarding factors effecting cost of buildings.									

	Course Outcomes										
CO1	Introduction and importance of Estimation in building construction and Architecture.										
CO2	To aware student regarding factors effecting the cost of Building.										
CO3	Method of taking out quantities of materials used at different stages in Building Construction.										
CO4	The analysis of rates of the material used in Construction and method of their organized presentation.										
CO5	To specify about the specification.										

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO						
1.	INTRODUCTION	Introduction to Estimating: Types of building estimates, drawings, to be attached with these estimates. 08 Preparation of rough cost estimates.	8	CO1						
2.	UNITS	Units of measurements and units of payment of different items of works related to buildings.	7	CO2						
3.	METHODS OF TAKING OUT QUANTITIES	Different methods of taking out quantities: Centre line into- in/ out-to-out methods.	6	CO3						
4.	ANALYSIS OF RATES	Steps in the analysis of rates for the following items of work, requirements of material, labour, sundries and contractor's profit. (a) Earth works in excavation in foundation. (b) Earth work in filling. (c) Lime and Cement concrete in foundation. (d) Brick work in foundation. (e) Brick work in super structure. (f) Plastering and pointing. (g) Flooring. (h) R.C.C. and R.B. roof slabs. (i) R.C.C. and R.B. work in beams, lintels and sunshade. (j) Woodwork in chaukhats/frames of doors and windows. (k) Woodwork in shutters of doors and windows. (l) Whitewashing, color washing, distempering, water-proof cement paint on walls and ceiling. (m) Painting on doors and windows.	10	CO4						
5.	SPECIFICATIONS	Need, General specifications of buildings, methods of writing specifications. Detailed specifications of the above-mentioned items of work.	9	CO5						
Reference	es Books:									
1. Estimating and costing in Civil Engg. by B.N. Dutta										
2. Estima	ting, costing, specific	ation and valuation by M. Chakraborti.								

e-Learning Source:

1. https://www.youtube.com/live/RHQESQqrZEY?si=qesHgO__V8y4fEEd

PO- PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PSO1	PSO2	PSO3
CO																
CO1	-	-	-	-	-	-	-	-	-	-	-	3	-	3	-	1
CO2	-	-	-	2	-	-	2	-	-	2	-	3	-	2	-	-
CO3	3	-	-	-	-	-	-	-	-	1	-	3	-	-	1	-
CO4	1	-	-	-	2	-	-	-	-	-	-	3	-	-	2	-
CO5	3	-	-	-	-	-	1	-	-	-	-	3	-	1	-	-



Effective from Session: - 2017-2018												
Course Code	DAR-502	Title of the Course	BUILDING CONSTRUCTION-II	L	Т	Р	С					
Year	III	Semester	V	01	00	03	-					
Pre-Requisite	NONE	Co-requisite	NONE									
Course Objectives	 Building Corpractical knowledge, sk 	struction-II further goes cills and awareness in co	in depth detail analysis of construction in Architecture, whi nstruction on field while an Architecture design is being exe	ch help cuted.	os to er	hance						

	Course Outcomes
CO1	To Further Enhance Understanding Of Construction Principles And Theories.
CO2	To introduce and familiarize students with construction methods and techniques addressing additional topics in Building construction.
CO3	Covering in brief Topics in Building Construction like Floors, Roofs, Scaffolding and Framework, Partition and Wall Paneling, and Construction
	Equipment.
CO4	To develop an understanding of scaffolding and formwork, including their types, requirements, and applications in construction, with a focus on
	concrete structures.
CO5	Introducing students to various construction equipment, including electric hand tools, earth-moving machinery, and transportation equipment, emphasizing their
	role in modern building construction processes.

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1.	FLOORS	Ground Floors: Requirements of good flooring material, types of ground floors, clay, murrum, brick, stone, cement concrete, mosaic, tile terrazzo and timber floors. Upper Floors: R.C.C., R.B., Filler joist, flag stone and timber floors.	08	CO1
2.	ROOFS	Roofs and Trusses: Purpose of roof, Brief description of different types of roofs and trusses.	06	CO2
3.	PARTITIONS AND WALL PANELING	Methods and construction technology of wall paneling, cladding, full and low height partitions, false 08 ceilings, railings, brick jails, honey combing etc	08	CO3
4.	SCAFFOLDING AND FORM WORKS	General - Types of scaffolds Form Work. Requirements for good formwork. Types of form work. The form works for concrete floors and beams. The form works for walls and columns. Period for removal of formwork	08	CO4
5.	CONSTRUCTION EQUIPMENTS	Electric Hand Tools: Vibrators, Pumps, Compactors/Rollers. Earth Moving and Excavation: Dozers, Scrapers, Graders, Shovels, Backhoe, Dragline, Trenchers. Transportation: Lorries, Trucks, Dumpers, Hoist, Cranes (Mobile, Static, Tower), Concrete mixers and pumps for ready mix concrete	10	CO5
Referenc	es Books:			

1. Building construction. By Sushil Kumar

2. Building Construction Engineering. By Gurcharan Singh

e-Learning Source:

University Lecture -Roof and Floor Construction (https://youtu.be/ptsDs8bcxTI?si=qTOc117_lLC52n7C)

PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PO 13	PSO1	PSO2	PSO3
C01	-	2	-	-	-	-	3	1	-	-	-	-	-	-	-	3
CO2	-	-	-	1	-	-	3	2	-	-	-	-	-	-	-	3
CO3	-	-	-	1	-	-	3	2	-	-	-	-	-	-	-	3
CO4	-	-	-	1	-	-	3	2	-	-	-	-	-	-	-	3
CO5	-	1	-	-	-	-	3	1	-	-	-	-	-	-	-	3

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator



Effective Session: - 2017-2018														
Course Code	DAR - 503	Title of the Course	INTERIOR DESIGN	L	Т	Р	С							
Year	III	Semester V 03 01 00 -												
Pre-Requisite	NONE	ONE Co-requisite NONE												
	• Architecture design is not complete without an Interior. In other words, Interior is a key influential part of any Architecture													
Course Objectives	Design. It not only help	s in further customization	on enhance Design. But also, its functional and psychologica	I bene	fits car	not be								
	• The spaces, f	acilities and services all	ocated in a particular Design with Interior design are made i	nto fun	ctional	llv usal	ble							
	and livable spaces appr	opriately aligned with the	ne purpose of Design or design accordingly. Interior design g	ives a	better	visuali	zation							
	of the space and how it	will emerge after comp	etition not only to Designer but also to the client as well.											

	Course Outcomes
CO1	A brief introduction to basic principle of Interior design with also addressing its functional and psychological concepts.
CO2	The conversion of space, facilities and services allocated in particular Design are made into functionally us a blend livable space.
CO3	Covering in brief Topics in Building Construction like Floors, Roofs, Scaffolding and Framework, Partition and Wall Paneling, and Construction
	Equipment.
CO4	To familiarize students with various materials used in interior finishes, including paneling, cladding, surface treatments, false ceilings, flooring,
	and soft furnishings, enabling them to make informed design choices.
CO5	To introduce the theory of colors and their psychological effects, emphasizing color schemes and classifications to enhance the aesthetic and functional aspects of
	interior spaces.

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1.	INTRODUCTION	Principles of interior design, objectives of planning for interior design, Factors affecting the interior design. 10 Functionalism and comfort. Interior of Kitchen and Toilet.	10	CO1
2.	LIGHTING DESIGN	Comfortable design, Natural daylight, ventilation, Artificial light, lighting design.	08	CO2
3.	ROOM	Interior of Bedroom, living room and Dining room	10	CO3
4.	MATERIALS	Materials for paneling and cladding, surface finishing by wall papers and paints. False ceiling and floor covering, curtains and upholstery.	06	CO4
5.	COLOR	06	CO5	
Reference	es Books:			
1. Interior I	Design by Ahmad Kasu			

2. Interior Design by Joseph Di Chiara

3. Space Planning by Julius Bamero

e-Learning Source:

Interior Design - A Technical Guide (https://youtu.be/KSKDxKwlue8?si=wfs6h-pwaDHnNFR_)

PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PO 13	PSO1	PSO2	PSO3
СО																
CO1	-	-	-	2	-	-	3	-	-	-	-	-	-	3	-	-
CO2	-	-	-	-	-	-	3	2	-	-	-	-	-	3	-	-
CO3	-	-	-	-	1	-	3	-	-	-	-	-	-	3	2	-
CO4	-	-	-	1	-	-	3	-	-	-	-	-	-	3	2	1
CO5	-	-	-	-	1		3	2	-	-	-	-	-	2	-	-

Name & Sign of Program Coordinator	Sign & Seal of HoD



Effective from Session: 2017-2018									
Course Code	DAR 504	Title of the Course	WORKING DRAWING	L	Т	Р	С		
Year	3 rd YEAR	Semester	5 th SEM	3	1	0	-		
Pre-Requisite	NONE Co-requisite NONE								
Course Objectives	 The course aims communication t Familiarization v Implication of k solutions. 	at developing the req ool in the practice of with drafting tools and nowledge of design for	uisite level of proficiency in Drawing, which is seen as architecture just like language. l accessories. undamentals and knowledge gained in other subjects to	a prin deve	mary lop be	etter d	esign		

	Course Outcomes								
CO1	The course aims at developing the requisite level of proficiency in Drawing, which is seen as a primary communication tool in								
	the practice of architecture just like language.								
CO2	The subjects should also focus on developing design abilities by applying basic principles.								
CO3	Construction and choosing appropriate materials and techniques								
CO4	Demonstrates knowledge of common drawing symbols used in architectural drawings								
CO5	Design and produce detailed drawings or construction								

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1.	Site Plan	Site Plan Foundation plan with sectional detail	08	CO1
2.	Floor Plans	Ground floor plan Typical Floor plan Terrace Floor plan	10	CO2
3.	Sections	Sections one at least through staircase and toilet Elevations – front & rear	09	CO3
4.	Details-I	Details of Toilet & kitchen Cupboard drawings details	08	CO4
5.	Details-II	Boundary wall & Gate Design Electrical plan	06	CO5
Reference	es Books:			
Time Saver s	standards for interior design	n and space planning by Joseph Dochiara		
Building Dra	wing by M.G. Shah, C.M.	Kale, S.Y. Patki		
e-Learning	g Source:			
https://youtu	.be/u5JZW-tL6WU?si=Hiz	zhVJR0UXIX_Qrp		
https://yout	u.be/Tdrivxv6e0I?si=ZF	EEapczHOjJ1CY2		

PO-PSO		РО										PSO					
СО	POI	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PSO1	PSO2	PSO3	PSO4
C01	-	3	1	2	-	3	-	-	-	2	-	-	-	-	2	-	
CO2	-	2	-	1	-	2	-	2	-	2	-	-	-	1	-	3	
CO3	-	-	-	1	2	2	-	-	-	3	-	-	-	-	-	3	
CO4	-	-	-	-	2	-	-	-	-	-	3	-	2	3	-	-	
CO5	-	1	-	-	-	-	1	-	-	-	-	1	-	-	3	-	

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name	& Sign	of Program	Coordinator	

Sign & Seal of HoD



Effective from Session: 2017-2018									
Course Code	DAR-505	Title of the Course	STRUCTURE DESIGN	L	Т	Р	С		
Year	III	Semester	V	3	1	0	-		
Pre-Requisite	DAR-305	Co-requisite	NA						
Course Objectives	 To understa understand Developing of different 	nd the basic principle study of structural des students, material sk structural systems.	es of structural mechanics, so that it can help in build sign. ills to analyze and understand fundamentals and wor	ling a king c	strong of vari	g basi .ous p	s to arts		

	Course Outcomes
C01	The subject aims at clarifying the basic principles underlying the inventions of various structural ideas with a view to bridge the gap between architectural theory and structural reality.
CO2	Architectural structure and architectural form with a view to stimulating the faculty of conceiving and developing new systems.
CO3	They will learn the basic differences and importance of architect and structural engineer for each other.

UnitNo.	Title of the Unit		Contact	Mappe
			Hrs.	d CO
1.	Chain Survey	Validity, extent and content of structural knowledge necessary for an architect, need for understanding structural ideas, the difference between structural analysis and creation of structures, development of various forms. Classification of structural systems: Form-active structure systems, vector-active structure systems, bulk-active structure systems, surface-active structure systems, vertical structure systems.	8	CO1
2.	Compass Survey	Concept of reinforced concrete structures, advantages and disadvantages. Different materials used in RCC with their properties. Load and loading standard as per IS:875 Concept of design of reinforced concrete based on working stress method and limit state method and their difference. Simple problems including design of singly and doubly reinforced beam, one way and two-way slab.	8	CO2
3.	Levelling	Introduction, methods of pre-stressing and their application to large-space structures.	12	CO3
4.	Theodolite and Auto Level	Introduction to tension and compression members of steel roof trusses (No numerical problems should be asked in the examination).	6	CO1
5.	Plane Table Survey	Elements of Earthquake Engineering, zoning, base shear, lateral forces, ductile detailing and introduction to new codes.	6	CO2
Reference	es Books:			
1. R	einforced concrete b	by Ashok K. Jain.		
e-Learnir	ng Source:			

1. https://youtu.be/PNJvFTwA1jQ

PO- PSO	PO	PSO	PSO														
со	1	2	3	4	5	6	7	8	9	10	11	12	13	14	1	2	PSO 3
CO1	1	-	1	-	-	-	-	-	-	-	-	3	-	-	1	2	
CO2	2	-	-	-	-	-	-	-	2	-	-	3	1	-	2	-	2
CO3	2	-	-	-	-	-	-	2	1	-	-	3	1	-	-	1	3

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Effective from Session: 2017-2018									
Course Code	DAR 506	Title of the Course	BUILDING CONTRACT	L	Т	Р	С		
Year	3 rd YEAR	Semester	5 th SEM	3	1	0	-		
Pre-Requisite	NONE	Co-requisite	NONE						
Course Objectives	To acquaint the stu	dents with most of the	e general aspects of tender and contracts.						

	Course Outcomes							
CO1	The subject aims to acquaint the students with most of the general aspects of tender and contracts in very deep detail.							
CO2	The subject will get an introduction to different types of tenders and contracts.							
CO3	Also Familiarizing students with modern techniques to analyze climatic parameters and design buildings accordingly. The subject							
	will aim on the different responsibilities of contractors, engineers, architects, etc.							
CO4	The subject aims to acquaint the students with Execution of contracts.							
CO5	They will learn differences between prime cost and provisional sums.							

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1.	Introduction	Tendering, Invitation to tender – by private invitation, by negotiations, essential characteristics of a tender notice, opening of tenders, acceptance of a tender, tender document.	08	CO1
2.	Types Of Tenders	Types of tenders, Earnest Money, Security deposit, retention amount and its essential characteristics and purpose of retention amount.	06	CO2
3.	Contract	Contract, its legal definition and its types. Contract by a private party and public body. When contract becomes void. Discharge of contract.	10	CO3
4.	Duties Of an Architect and Contractor	Execution of a contract. Conditions with respect to the power and duties of an Architect. Contractor's duties and liabilities under the contract – (i)Administrative and Organization, (ii) Executive of Work.	08	CO4
5.	Costing And Sub- Contract	Problems arising out of contract conditions, prime cost, provisional sums. Essential characteristics of prime cost, duties of sub-contractor and payment to nominated sub-contractor	08	CO5
Reference	es Books:			
Professional	practice by Roshan H. Nar	navat		
Civil Engg. O	Contracts and estimates by	B.S. Patel.		
e-Learning	g Source:			
https://youtu	be.com/playlist?list=PLwn	nbF3J4oevVqPMsMXQld6yHzyj0jNZ&si=xRoyd69RCoqgXtFr		
https://yout	u.be/D5wB4Pxf0L0?si=	-kpTsPWwfqL2-377i		

https://youtu.be/D5wB4Pxf0L0?si=kpTsPWwfqL2-377i

PO-PSO	РО											PS	0				
СО	POI	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PSO1	PSO2	PSO3	PSO4
CO1	-	-	-	-	-	-	-	2	-	-	-	-	2	-	-	3	
CO2	-	-	-	-	-	-	-	2	-	-	-	-	1	-	2	-	
CO3	-	-	-	-	-	-	2	3	-	1	-	1	2	1	-	3	
CO4	-	-	-	-	-	-	2	1	-	2	-	-	-	-	2	-	
CO5	2	-	-	-	-	-	-	2	-	3	-	-	3	3	-	-	

Name & Sign of Program Coordinator	Sign & Seal of HoD



Effective from Session: - 2017-2018									
Course Code	DAR-507	Title of the Course	Architecture Design–III	L	Т	Р	С		
Year	III	Semester	V	01	00	04	-		
Pre-Requisite	NONE	Co-requisite	NONE						
Course Objectives	• Architecture Design is the soul of Architecture. The objective of Architecture is to Design, the framework of design encompasses almost everything manmade, but it is generally associated with any building environment, structure or object from town								
	planning, urban design, and landscape to furniture and objects. All the other subjects contribute to make an Architecture Design, such								
	is the irrelevance and D	s the irrelevance and Design's importance in Architecture.							
	 One who acquired 	uires the skills and knov	vledge required to make an Architecture Design can arguably	be ca	lled an	Archi	tect.		

	Course Outcomes							
CO1	Making students learn about the art of collecting data and carrying out analysis for the process of evolving design and individuality of approach.							
CO2	Students will understand about site planning: organization, scale, hierarchy, orientation and climate							
CO3	Students will understand about the layout and services of large public buildings with specialized services.							
CO4	Students will Understand design as a function of specific agenda of repetitive units, site conditions, orientation and climate.							
CO5	Students will Understand a detailed architectural model of a given design problem, emphasizing precision, material selection, and construction							
005	techniques.							

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO
1.	DESIGN PROBLEM -1	Design and of various technical projects like small industry, Auditorium, Cinema Hall etc. The design project should deal with constraints/restrictions like ground coverage, F.A.R site constraints and materials restrictions. Criticism of every design must be done at every stage and after every submission. Tendering, Invitation to tender – by private invitation, by negotiations, essential characteristics of a tender notice, opening of tenders, acceptance of a tender, tender document.	16	COI
2.	SEMINAR	Emphasis should be laid on the case study, important building related to design project given. The critical evaluation of the building is to be presented with adequate illustration via projections	04	CO2
3.	DETAILED MODEL OF DESIGN PROBLEM -1	Detailed model of the given Design Problem -1	04	CO3
4.	DESIGN PROBLEM -2	Recreational buildings with a focus on site development like resorts, farmhouses etc.	12	CO4
5.	DETAILED MODEL OF DESIGN PROBLEM -1	Detailed model of the given Design Problem -2	04	CO5
Reference	es Books:			
1. Neufert l	Fourth Edition			

e-Learning Source:

University Lecture -Architecture & Design (https://youtu.be/bLYTCzLaQeE?si=vrkocNlP7dne4zFJ)

PO-PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PO 13	PSO1	PSO2	PSO3
C01	-	1	3	3	2	1	3	1	2		3	3	3	3	2	1
CO2	-	-	_	2	3	1	3	1	3	3	1	1	2	3	2	2
CO3	-	1	-	3	3	-	2	1	1	2	2	2	1	2	1	1
CO4	-	2	3	3	3	-	3	1	2	3	3	2	2	3	2	2
CO5	-	1	-	3	3	-	2	1	1	2	2	2	1	2	1	1

-Low Correlation; 2	- Moderate Co	rrelation; 3-	- Substantial	Correlation



Effective from Session: 2017-2018										
Course Code	DAR – 508	Title of the Course	TOWN PLANNING	L	Т	Р	С			
Year	3 RD YEAR	Semester	5 TH SEM	03	01	0	-			
Pre-Requisite		Co-requisite								
Course Objectives	 To introduce architectural To develop of options and 	e the subject of Town projects in context o basic skills in plannin nd preparation of plan	planning to students of architecture so that the student f planning. g surveys, analysis, generating alternative planning str is.	s can 1 ategie	celate	to the	ation			

	Course Outcomes							
CO1	The subject focuses on generating an understanding about the development of civilization and its architectural implications.							
CO2	Learning about different types of city planning.							
CO3	Studying Town planning helps students to relate the architectural projects in context of planning.							
CO4	Students will learn how to plan effective transportation networks for towns and cities.							
CO5	Students will understand the definition and basic concept of zoning in urban planning.							

Unit No.	Title of the Unit		Contact Hrs.	Mapped CO			
1.	INTRODUCTION	Historical background of the modern city planning movement. Objects, importance and principles of town planning. Growth of towns, stages in town development, distribution of land uses, forms of planning	08	C01			
2.	ANCIENT PLANNING	Ancient town planning in India. Plans of old Indian cities - Mohenjo-Daro and Harapa, Taxila and Nalanda.	06	CO2			
3.	MODERN PLANNING CONCEPTS	Concept of Master Plan, Necessity of Master Plan, preparation of Master Plan, Neighborhood Planning, Idea of city planning such as Chandigarh, Jaipur, Gandhinagar.	12	CO3			
4.	URBAN ROADS	General requirements of a good city road. Classification of urban roads, types of street systems. Through and bypass roads, outer and inner ring roads, express ways, Freeways, Road junctions, parking, Traffic capacity of roads.	06	CO4			
5.	ZONING AND SLUMS	Meaning of the term, Principles of zoning, Advantages of Zoning, Importance & Aspects of Zoning, Transition Zone, Economy of Zoning.	08	CO5			
Referen	ices Books:						
1.	Town Planning by S.C. R	angwala					
2.	The Landscape of Man by	y Geofery & Susan					
e-Learning Source:							
https://you	tu.be/kzW11gIRjIk?si=zsRY	hxqaJWL8iivW					
https://yout	tu.be/_oUwtT7W3rU?si=x2H	IvbuRz8Ma3GS0g					

https://youtu.be/Xms5szrHDh0?si=3DmkRIl4D4EIp9kv

PO- PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PSO1	PSO2	PSO3
СО																
CO1	-	-	2	1	3	-	-	-	3	1	-	-	2	1	2	3
CO2	-	-	2	3	1	-	1	-	3	1	-	-	2	-	-	1
CO3	-	-	1	2	3	-	1	-	3	2	-	-	2	-	2	-
CO4	2	-	-	-	-	-	-	-	3	-	-	3	-	3	-	1
CO5	-	-	-	-	3	2	-	-	2	2	-	3	-	-	-	2

1-Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Name & Sign of Program Coordinator	Name	& Sign	of Program	Coordinator	
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Sign & Seal of HoD