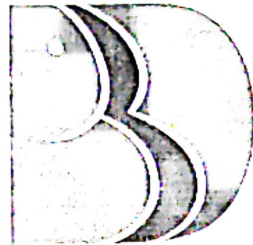


**BABU BANARASI DAS UNIVERSITY,
LUCKNOW**



BBD UNIVERSITY

COURSE STRUCTURE

&

SYLLABUS

FOR

(Bachelor of Architecture-1ST YEAR)

On

Choice Based Credit System

(Effective from the Session: 2019-20)

School of Architecture & Planning

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School of Architecture & Planning
BBD UNIVERSITY
Bachelor of Architecture
SCHEME OF TEACHING & SCHEME OF EXAMINATION

Course Category	SUBJECT CODE	SUBJECT NAME	THEORY / PRACTICAL	SCHEME OF TEACHING				SCHEME OF EVALUATION							EXAM HRS		
				Lecture (L)	Tutorial (T)	Studio / Practical	Total (hrs)	CIA				ESE					
								CT	TA	AT	TOTAL	Theory (T)	Practical / Viva	TOTAL			
								A		B		A+B					
SEMESTER I																	
PC	AR1101	ARCHITECTURAL DESIGN - I	THEORY	2	3	0	5	6	24	8	8	40	60	0	60	100	6
BS & AE	AR1102	BUILDING CONSTRUCTION & MATERIALS - I	THEORY	1	0	0	1	2	24	8	8	40	60	0	60	100	3
BS & AE	AR1103	ARCHITECTURAL STRUCTURE - I	THEORY	1	1	0	2	2	24	8	8	40	60	0	60	100	3
PL	AR1104	ARCHITECTURAL DRAWING - I	THEORY	2	2	1	5	5	24	8	8	40	60	0	60	100	3
PL	AR1105	VISUAL ARTS - I	THEORY	1	0	2	3	2	24	8	8	40	60	0	60	100	3
BS & AE	AR1106	ENVIRONMENTAL STUDIES	THEORY	1	1	0	2	2	24	8	8	40	60	0	60	100	3
PC	AR1101P	ARCHITECTURAL DESIGN - I (VIVA VOCE)	PRACTICAL	0	0	2	2	1	0	0	0	0	0	50	50	50	
BS & AE	AR1102P	BUILDING CONSTRUCTION & MATERIALS - I (VIVA VOCE)	PRACTICAL	0	0	3	3	1	0	0	0	0	0	50	50	50	
PL/PT	AR1151	LECTURE - I	PRACTICAL	1	0	1	2	2	0	0	0	50	0	50	50	100	
PL	AR1152	WORKSHOP	PRACTICAL	0	0	2	2	1	0	0	0	50	0	50	50	100	
PAE/SEC	AR1153	COMMUNICATION SKILLS	PRACTICAL	1	1	0	2	2	0	0	0	50	0	50	50	100	
BS & AE	AR1154	HUMANITIES	PRACTICAL	1	0	0	1	1	0	0	0	50	0	50	50	100	
PAE/SEC	GP1101	GENERAL PROFICIENCY	PRACTICAL	0	0	0	0	1	0	0	0	0	0	100	100	100	
				TOTAL				30	27	TOTAL						1200	
SEMESTER II																	
PC	AR1201	ARCHITECTURAL DESIGN - II	THEORY	2	3	0	5	6	24	8	8	40	60	0	60	100	6
BS & AE	AR1202	BUILDING CONSTRUCTION & MATERIALS - II	THEORY	1	0	0	1	2	24	8	8	40	60	0	60	100	3
BS & AE	AR1203	ARCHITECTURAL STRUCTURE - II	THEORY	1	1	0	2	2	24	8	8	40	60	0	60	100	3
PL	AR1204	ARCHITECTURAL DRAWING - II	THEORY	1	1	3	5	4	24	8	8	40	60	0	60	100	3
PL	AR1205	VISUAL ARTS - II	THEORY	1	0	2	3	2	24	8	8	40	60	0	60	100	3
PC	AR1206	HISTORY OF ARCHITECTURE & CULTURE - I (ANCIENT CIVILIZATIONS)	THEORY	1	1	0	2	2	24	8	8	40	60	0	60	100	3
PC	AR1201P	ARCHITECTURAL DESIGN - II (VIVA VOCE)	PRACTICAL	0	0	2	2	1	0	0	0	0	0	50	50	50	
BS & AE	AR1202P	BUILDING CONSTRUCTION & MATERIALS - II (VIVA VOCE)	PRACTICAL	0	0	3	3	1	0	0	0	0	0	50	50	50	
PL/PT	AR1251	ELECTIVE - II	PRACTICAL	1	0	1	2	2	0	0	0	50	0	50	50	100	
PC	AR1252	ARCHITECTURAL RESEARCH - I	PRACTICAL	1	1	0	2	2	0	0	0	50	0	50	50	100	
BS & AE	AR1253	SURVEYING & LEVELLING	PRACTICAL	1	0	2	3	2	0	0	0	50	0	50	50	100	
PAE/PAL/CC	AR1254	NTEE - I (EDUCATIONAL TOUR / DOCUMENTATION + WORKSHOP)	PRACTICAL	0	0	0	0	1	0	0	0	50	0	50	50	100	
PAE/SEC	GP1201	GENERAL PROFICIENCY	PRACTICAL	0	0	0	0	1	0	0	0	0	0	100	100	100	
				TOTAL				30	28	TOTAL						1200	
SEMESTER III																	
PC	AR1301	ARCHITECTURAL DESIGN - III	THEORY	2	3	0	5	6	24	8	8	40	60	0	60	100	12
BS & AE	AR1302	BUILDING CONSTRUCTION & MATERIALS - III	THEORY	1	0	0	1	2	24	8	8	40	60	0	60	100	3
BS & AE	AR1303	ARCHITECTURAL STRUCTURE - III	THEORY	1	1	0	2	2	24	8	8	40	60	0	60	100	3
PL	AR1304	ARCHITECTURAL DRAWING - III	THEORY	1	1	3	5	4	24	8	8	40	60	0	60	100	3
PL	AR1305	VISUAL ARTS - III	THEORY	1	0	2	3	2	24	8	8	40	60	0	60	100	3
PC	AR1306	HISTORY OF ARCHITECTURE & CULTURE - II (HINDU ARCH)	THEORY	1	1	0	2	2	24	8	8	40	60	0	60	100	3
BS & AE	AR1307	BUILDING SERVICES - I (WATER SUPPLY & SANITATION)	THEORY	1	1	0	2	2	24	8	8	40	60	0	60	100	3
PC	AR1301P	ARCHITECTURAL DESIGN - III (VIVA VOCE)	PRACTICAL	0	0	2	2	1	0	0	0	0	0	50	50	50	
BS & AE	AR1302P	BUILDING CONSTRUCTION & MATERIALS - III (VIVA VOCE)	PRACTICAL	0	0	3	3	1	0	0	0	0	0	50	50	50	
PL/PT	AR1351	ELECTIVE - III	PRACTICAL	1	0	1	2	2	0	0	0	50	0	50	50	100	
PC	AR1352	ARCHITECTURAL RESEARCH - II	PRACTICAL	1	0	2	3	2	0	0	0	50	0	50	50	100	
PAE/PAL/CC	AR1353	NTEE - II (SUMMER ASSIGNMENT)	PRACTICAL	0	0	0	0	1	0	0	0	50	0	50	50	100	
PAE/SEC	GP1301	GENERAL PROFICIENCY	PRACTICAL	0	0	0	0	1	0	0	0	0	0	100	100	100	
				TOTAL				30	28	TOTAL						1200	
SEMESTER IV																	
PC	AR1401	ARCHITECTURAL DESIGN - IV	THEORY	2	3	0	5	6	24	8	8	40	60	0	60	100	12
BS & AE	AR1402	BUILDING CONSTRUCTION & MATERIALS - IV	THEORY	1	0	0	1	2	24	8	8	40	60	0	60	100	3
BS & AE	AR1403	ARCHITECTURAL STRUCTURE - IV	THEORY	1	0	2	3	2	24	8	8	40	60	0	60	100	3
BS & AE	AR1404	CLIMATOLOGY	THEORY	1	1	0	2	2	24	8	8	40	60	0	60	100	3
PL	AR1405	HISTORY OF ARCHITECTURE & CULTURE - III (ISLAMIC ARCH)	THEORY	1	2	0	3	3	24	8	8	40	60	0	60	100	3
BS & AE	AR1406	BUILDING SERVICES - II (ELECTRICAL & LIGHTING)	THEORY	2	1	0	3	3	24	8	8	40	60	0	60	100	3
PL	AR1401P	ARCHITECTURAL DESIGN - IV (VIVA VOCE)	PRACTICAL	0	0	2	2	1	0	0	0	0	0	50	50	50	
BS & AE	AR1402P	BUILDING CONSTRUCTION & MATERIALS - IV (VIVA VOCE)	PRACTICAL	0	0	3	3	1	0	0	0	0	0	50	50	50	
PL/PT	AR1451	ELECTIVE - IV	PRACTICAL	1	0	1	2	2	0	0	0	50	0	50	50	100	
PL	AR1452	ARCHITECTURAL RESEARCH - III	PRACTICAL	1	0	2	3	2	0	0	0	50	0	50	50	100	
PAE/SEC	AR1453	COMPUTER STUDIO - I (AUTO CAD 2D & 3D)	PRACTICAL	1	0	2	3	2	0	0	0	50	0	50	50	100	
PAE/PAL/CC	AR1454	NTEE - III (EDUCATIONAL TOUR / DOCUMENTATION + WORKSHOP)	PRACTICAL	0	0	0	0	1	0	0	0	50	0	50	50	100	
PAE/SEC	GP1401	GENERAL PROFICIENCY	PRACTICAL	0	0	0	0	1	0	0	0	0	0	100	100	100	
				TOTAL				30	28	TOTAL						1200	

SEMESTER X																	
BSA AE	AR1001	PROJECT BASED ADVANCED CONSTRUCTION TECHNIQUES	THEORY	0	0	4	4	2	24	8	8	40	60	0	60	100	3
PAE/PAEE	AR1002	PROJECT MANAGEMENT (PERT, CPM)	THEORY	2	1	0	3	1	24	8	8	40	60	0	60	100	3
PAE/PAEE	AR1003	PROFESSIONAL PRACTICE - 2	THEORY	2	1	0	3	1	24	8	8	40	60	0	60	100	3
TEPE	AR1051	ELECTIVE - X	PRACTICAL	1	0	2	1	2	0	0	0	50	0	50	50	100	
PC	AR1052	ARCHITECTURAL DESIGN THESIS	PRACTICAL	1	16	0	17	17	0	0	0	100	0	400	400	700	
PAE/PAEE	GP1001	GENERAL PROFICIENCY	PRACTICAL	0	0	0	0	1	0	0	0	0	0	100	100	100	
				TOTAL		10	28							TOTAL		1750	

ELECTIVES																
Course Category	SUBJECT	ELECTIVES														
	AR1151	ELECTIVE - I	AR1151(1)	ARTS / PERFORMING ARTS PROJECT - I												
			AR1151(2)	ARCHITECTURAL COMPETITIONS - I												
			AR1151(3)	FOREIGN LANGUAGE - I												
			AR1151(4)	ART APPRECIATION												
			AR1151(5)	PHOTOGRAPHY												
	AR1251	ELECTIVE - II	AR1251(1)	ARTS / PERFORMING ARTS PROJECT - II												
			AR1251(2)	ARCHITECTURAL COMPETITIONS - II												
			AR1251(3)	FOREIGN LANGUAGE - II												
			AR1251(4)	GRAPHIC DESIGN - I												
			AR1251(5)	PUBLIC SPEAKING												
	AR1351	ELECTIVE - III	AR1351(1)	ARTS / PERFORMING ARTS PROJECT - III												
			AR1351(2)	ARCHITECTURAL COMPETITIONS - III												
			AR1351(3)	FOREIGN LANGUAGE - III												
			AR1351(4)	SCALE & PROPORTIONS												
			AR1351(5)	RURAL ARCHITECTURE												
	AR1451	ELECTIVE - IV	AR1451(1)	TENSECURITY STRUCTURES												
			AR1451(2)	ARCHITECTURAL COMPETITIONS - IV												
			AR1451(3)	FOREIGN LANGUAGE - IV												
			AR1451(4)	ERGONOMICS												
			AR1451(5)	TRADITIONAL ARTS & CRAFTS - I												
	AR1551	ELECTIVE - V	AR1551(1)	DESIGN OF BUILDING ELEMENTS												
			AR1551(2)	ARTS / PERFORMING ARTS PROJECT - V												
			AR1551(3)	ARCHITECTURAL COMPETITIONS - V												
			AR1551(4)	FOREIGN LANGUAGE - V												
			AR1551(5)	GRAPHIC DESIGN - II												
	AR1651	ELECTIVE - VI	AR1651(1)	TRADITIONAL ARTS & CRAFTS - II												
			AR1651(2)	ARTS / PERFORMING ARTS PROJECT - VI												
			AR1651(3)	ARCHITECTURAL COMPETITIONS - VI												
			AR1651(4)	FOREIGN LANGUAGE - VI												
			AR1651(5)	FURNITURE DESIGN												
	AR1851	ELECTIVE - VIII	AR1851(1)	PRODUCT DESIGN												
			AR1851(2)	ARTS / PERFORMING ARTS PROJECT - VIII												
			AR1851(3)	ARCHITECTURAL COMPETITIONS - VIII												
			AR1851(4)	FOREIGN LANGUAGE - VIII												
			AR1851(5)	ADVANCED COMPUTERS												
	AR1951	ELECTIVE - IX	AR1851(6)	PSYCHOLOGY IN ARCHITECTURE												
			AR1851(7)	REAL ESTATE												
			AR1851(8)	VAASTU SHASTRA												
			AR1851(9)	HIGH - RISE BUILDINGS												
			AR1851(10)	RHAPSODY ARCHITECTURE												
	AR1051	ELECTIVE - X	AR1951(1)	ARCHITECTURAL COMPETITIONS - IX												
			AR1951(2)	FOREIGN LANGUAGE - IX												
			AR1951(3)	ADVANCED SPACIAL ANALYSIS												
			AR1951(4)	ARCHITECTURAL CONSERVATION												
			AR1951(5)	BIOPHILIC ARCHITECTURE												
	AR1051	ELECTIVE - X	AR1951(6)	VALUATION												
			AR1951(7)	FUTURISTIC ARCHITECTURE												
			AR1951(8)	MILL ARCHITECTURE												
			AR1951(9)	INTERIOR DESIGN												
			AR1951(10)	LANDSCAPE DESIGN												
	AR1051	ELECTIVE - X	AR1951(11)	SERVICES												
			AR1951(12)	WORKING DRAWING												
			AR1951(13)	ESTIMATION & COSTING												
			AR1951(14)	ADVANCED SOFTWARES												
			AR1951(15)	PROJECT FEATURES												



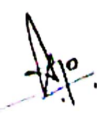
Adul

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SEMESTER I

Ap. 
Mohd 
A.  Umar
Ali

COURSE CODE: AR 1101	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME: ARCHITECTURAL DESIGN-I	2	3	0	5	6	40	60	--	100	6
COURSE CATEGORY-PC										

SUBJECT OBJECTIVE

- To introduce to the students the fundamentals of basic design and development of design vocabulary.
- To nurture design thinking and to enable them to apply the same thought process in developing three-dimensional compositions.
- To introduce drawings and models as tools for conceptualization, organization and evolution of design thought process.

LEARNING OUTCOME

- Students will be able to explore basic design elements and their application in a visual composition and in architectural forms and spaces
- Analyze the emerging trends in professional architectural design.

MODULE 1

Orientation to the Architecture Profession

Role of an Architect in the built environment and changes in habitat in history. Building process, role of other professional in building. Architects act, C.O.A. I.I.A., NASA, etc.

MODULE 2

Basic Design

Introduction to elements of design like point, line, plane, solid and void, color, tone, texture. Understanding the importance of design principles like balance, harmony, rhythm, contrast, symmetry, scale, and proportions.

Basic design exercises: Analysis of objects and product design etc.

MODULE 3

Spaces and Form

Application of design principle in conceiving elementary architectural spaces through planes. Study of concept of space through 3D compositions. Introduction to external and internal forms, Analytical appraisals of forms, and their quality through form and transformation like addition and subtraction. 3D model exercises, exploring play of light and shade and application of color.

MODULE 4

Scale in Architecture

Simple measurement exercises about the idea of scale in architecture.

MODULE 5

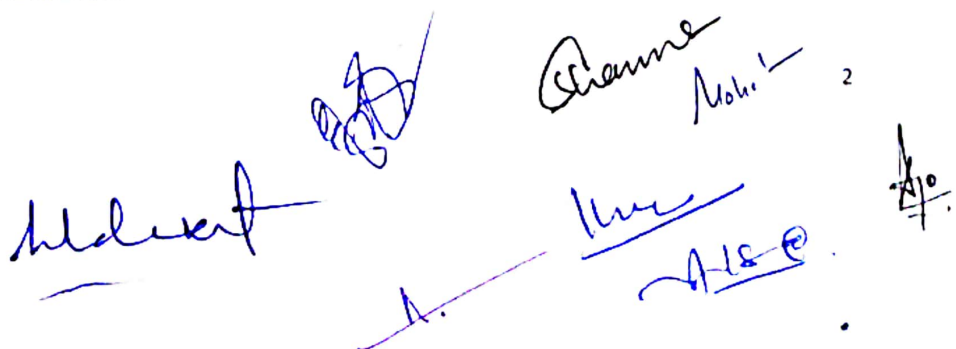
Order in Architecture

Architecture Geometrical, Structural, Dimensional, Material, Spatial order - through observation of surroundings as well as simple exercises in 2-D and 3-D. Exercises in order and transformations of form and space.

NOTE: Compilation of all Architectural Design projects in the form of report/fact-file. Submission should be done in hardcopy as well as in softcopy (PowerPoint presentation/Photoshop presentation)

REFERENCE BOOKS

1. Ching, Francis D. K. "Architecture: Form, Space and Order", John Wiley and Sons Inc.
2. Lidwell, William, Holden, Kestina, Butler, Jill, "Universal Principles of Design", Rockport - Publications, Massachussets.



3. Broadbent, G. (1973). Design in Architecture - Architecture and Human Science. New York: John Wiley and Sons.
4. Chauhan, P. (2005). Learning Basic Design. Mumbai: Rizvi College of Architecture.
5. Design Drawing. Hoboken: John Wiley & Sons.
6. Roger, K. L. (1998). Architect? A Candid Guide to the Profession. Cambridge: The MIT Press.
7. Rasmussen, S. (1962). Experiencing Architecture. 2nd Rev. Ed. Cambridge: MIT Press.

Handwritten notes and signatures in blue ink at the bottom of the page. The text includes:
- A signature that appears to be "Shamir".
- The name "Mohit" written below the signature.
- The number "3" written to the right of "Mohit".
- The name "Anurag" written below "Mohit".
- The name "Apo" written below "Anurag".
- A signature that appears to be "Anurag" written above "Anurag".
- A signature that appears to be "Anurag" written above "Apo".
- A signature that appears to be "Anurag" written above "Apo".

COURSE CODE:AR1102	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-BUILDING CONSTRUCTION&MATERIALS-I										
COURSE CATEGORY-BS&AE	1	0	0	1	2	40	60	--	100	3

SUBJECT OBJECTIVES

- To familiarize the students with constituents, properties and uses of traditional building materials used in construction.
- To understand the usage of these traditional building materials in simple building works.
- To develop skills in understanding the complexities & constrains of brick masonry.
- To familiarize the student with the basic building construction practices on site.

LEARNING OUTCOME

- The students would be familiarized with vernacular terminology as prevalent in this part of the country.
- The emphasis will have knowledge of construction details as applicable to Indian climatic conditions.
- Site visits and market surveys will help them explore various tools, equipments in the building construction.

BUILDING MATERIALS & CONSTRUCTION TECHNOLOGY

MODULE-1

Clay & Clay Products: Mud including stabilized earth, Burnt Bricks, Brick Tiles, Brick Ballast and Surkhi. Classification, Availability, Characteristics, Manufacture and Uses of Cement, Lime, Mortar: Mud, Lime, Cement; Concrete Lime, Sand & Surkhi.

MODULE-2

Element of Building Terminology, Nomenclature of various parts of building from foundation to roof.

MODULE-3

Brick Work: Brick Terminology, Simple Bonds e.g. English bond & Flemish (single and double) bond in brick work for up to two brick thick walls. Brick Work Details at quoins and junctions in English bond and Flemish bond for up to two brick thick walls. Brick Work Details of piers (attached and detached), Buttresses, Lintel and Sill.

Stone Work: Elementary Stone Masonry, Types of joints. Random, Course and Ashlar Stone work.

MODULE-4

Foundation: Need, Design criteria, Foundation concrete, Details of simple spread foundations for load bearing walls of various thicknesses up to two brick thick.

LIST OF ASSIGNMENTS

1. To study the availability, constituents, properties, manufacturing processes, storage, transportation and applications of above mentioned materials.
2. To visit brick kiln/ lime kiln/ cement factory etc. for better understanding and submit report.
3. To study the various tools, equipments used in masonry works.
4. To construct examples of brick & stone masonry works in construction yard.
5. To survey construction work on site and submit report.

WORKSHOP/CONSTRUCTION YARD PRACTICE & SITE EXPOSURE

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MODULE-5

Workshop/Construction Yard Practice Practicing in construction yard by making the examples of brick masonry works etc.

Site Exposure to building construction practices on site of various items of work from foundation to roof and finishes.

CONSTRUCTION PLATES

1. To understand the terminology used in buildings, through face section.
2. To understand square stopped ends of said bonds in brick masonry.
3. To understand L, T and X Junctions of said bonds in brick masonry.
4. To understand of piers (attached and detached), Buttresses, Lintel and Sill.
5. To understand square stopped ends of Random, Course and Ashlar stone masonry.
6. To understand spread foundation for masonry load bearing walls.

REFERENCE BOOKS

1. McKay, W.B., "Building Construction Volume I, II, III and IV", Longmans, 1955.
2. Ching, Francis D. K. and Adams, Cassandra, "Building Construction Illustrated", Wiley and Sons, 2000.
3. The Construction of Buildings – Barry Volume I, II, III and IV
4. Chudley, Roy, "Construction Technology", Longman, 2005.
5. Building Construction Mitchell (Elementary and Advanced) Renewal, S. C., "Building Construction", Charotar Publishing House, 2007
6. Building Construction-Bindra&Arora.
7. Punmia B. C., Jain A. J., and Jain A.J., Building Construction, Laxmi Publications, 2005.
8. Building Materials by SC Rangwala: Charotar Pub. House, Anand
9. M. Gambhir, NehaJamwal, Building Materials Products, Properties and Systems, Tata McGraw Hill
10. Publishers, New Delhi, 2011.
11. R.K.Gupta, Civil Engineering Materials and Construction Practices, Jain brothers, New Delhi, 2009.
12. National Building Code of India (Latest Edition), Bureau of Indian Standards.
13. Engineering Materials-Deshpande.
14. Engineering Material-Roy Chowdary
15. Designing with models – Criss. B. Mills.
16. Morris, M., "Architecture and the Miniature: Models", John Wiley and Sons, 2000.
17. Mills, Criss B., "Designing with Models: A Studio Guide to Making and Using Architectural Models", Thomson and Wadsworth, 2000.
18. Raghuwanshi, B.S., "A Course in Workshop Technology - Vol. I and II", Dhanpat Rai and Co, 2001.

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Mohit
Vivek
Mohit⁵
A.P.
Shame

COURSE CODE:AR1103	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-ARCHITECTURAL STRUCTURE -I	1	1	0	2	2	40	60	0	100	3
COURSE CATEGORY-BS&AE										

SUBJECT OBJECTIVE

- Introduction of terminology of Structures to architectural students.
- To understand the basic principles of structural mechanics so that it forms the basis for study of structural design.

LEARNING OUTCOME

- To equip the students with necessary mathematical background to comprehend the aspects of design elements and structural stability.
- To recap students about the mathematical concepts of statistics and probability, matrices, differential and integral calculus and partial differentiation and enable them to understand the application of these mathematical concepts related to architecture.

MODULE-1

Simple Stresses and Strains

Elasticity, Stress, Strain, Types of stresses, Elastic limit, Hook's Law, Modulus of Elasticity, Stresses in Composite Bars. Primary or Linear Strain, Poisson's ratio, Shear stress, Principal stresses and strains.

MODULE-2

Centre of gravity - definition, Methods of finding out centre of gravity of simple figures, Centre of parallel forces.

MODULE-3

Moment of Inertia Definition, Important theorems, Calculation of moment of inertia by first principles and its application, Moment of inertia of composite sections.

MODULE-4

Elements of Statics Simple beams in bending, Section modulus, Direct and bending stress. Shear stress in section of beam, Shears centre.

MODULE-5

Shear Force and Bending Moments in Beams, Moment of resistance. Shear force and bending moment diagrams.

REFERENCE BOOKS

1. Nautiyal B. D., "Introduction to Structural Analysis", B.H.U.
2. Punmia P. C., "Strength of Materials & Mechanics of Structures".
3. Khurmi R. S., "Strength of Materials".
4. Senol Utku, "Elementary Structural Analysis".
5. R.K.RAJPUT., "Strength of Materials".



COURSE CODE: AR1104	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	I/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME- ARCHITECTURAL DRAWING-I	2	2	1	5	5	40	60	0	100	3
COURSE CATEGORY PC										

SUBJECT OBJECTIVE

- Familiarization with drawing tools and accessories.
- To give a basic knowledge of good drafting & lettering techniques.
- To develop comprehension & visualization of geometrical forms.

LEARNING OUTCOME

- The students will be familiarized with the fundamental techniques of architectural representation and equipped with the basic principles of representation.
- The skill of the student will be enhanced and developed in graphical language of architecture.

MODULE-1

Orientation to Architectural Drawing Introduction to the subject & drawing equipments. Setting of drawing equipments drafting & quality of lines with pencil through various pattern. Free hand Lettering of different types of letter. Introduction to the types of lines, format, solids, scales & dimensioning

MODULE-2

Geometrical Construction

Draw arc, tangents Division of lines & angles Draw helix & ogee curve. Inscribe circles inside & outside polygon. To inscribe a polygon in a given circle (by general & spatial method). To constructs a polygon of given side (by general & spatial method)

MODULE-3

Orthographic Projections

Introduction to orthographic projection. Planes of projections. Projection of point, line & planes in different position. Projection of regular rectilinear and circular solids (prism, pyramid, cone, cylinder spheres) in different position.

MODULE-4

Solid Geometry

Sections of regular rectilinear and circular solids (prism, pyramid, cone, cylinder spheres) in varying conditions of sectional plane. Intersection of line and plane Intersection of prism and prism, Intersection of cylinder and cylinder, Intersection of cylinder and prism, Intersection of cone and cylinder.

MODULE-5

Development of surfaces

Development of regular rectilinear and circular shapes.

REFERENCES BOOKS

1. H. Morris, Geometrical Drawing for Art Students - Orient Longman, Madras, 2004.
2. Francis Ching, Architectural Graphics, Van Nostrand Rein Hold Company, New York, 1964.
3. N.D.Bhatt, Elementary Engineering Drawing (Plane and Solid Geometry), Charotar Publishing House, India
4. George K.Stegman, Harry J.Stegman, Architectural Drafting Printed in USA by AmericanTechnical Society, 1966.
5. C.Leslie Martin, Architectural Graphics, The Macmillan Company, New York, 1964
6. Rendering with pen and ink by Arthur L. Guptill

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COURSE CODE:AR1105	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-VISUAL ARTS-I	1	0	2	3	2	40	60	0	100	3
COURSE CATEGORY-PC										

SUBJECT OBJECTIVE

- To familiarize students with application of art in architecture.
- To introduce fundamental techniques of Visual representation and to equip them with the basic principles of representation.
- To enhance skills in developing a graphical language of architecture.

LEARNING OUTCOME

Upon successful completion of this course students will be able to:

- Understand art with respect to Architecture.
- Student will develop art and graphic skill.

MODULE -1

Free hand sketching

Daily life objects- trees shrubs and plants, vehicle (2 wheeler) etc.

MODULE -2

Rendering skills: Monochrome medium, textures, finishes using various equipment like rotoring pens, airbrush, watercolors, dry pastels etc.


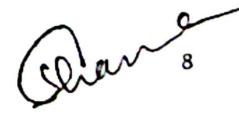
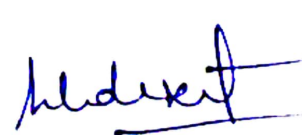

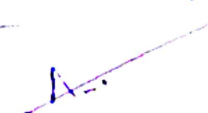


Painting techniques through different medium like watercolor etc.

MODULE -3

Sculpture: clay, terracotta, paper mache and sculpture from waste material.

REFERENCE BOOKS

1. Arnold Dana, "Art History – A Very Short Introduction", Oxford University Press.
2. Stallabrass, Julian, "Contemporary Art – A Very Short Introduction", Oxford University Press
- 3 Martin, L. C. (1970). Architectural Graphics. 2nd Ed. Macmillan Pub Co.
4. Landscape Graphics: Plan, Section, and Perspective Drawing of Landscape Spaces by Grant Reid
5. Rendering with pen and ink by Arthur L. Guptill


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COURSE CODE:AR1106	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME: ENVIRONMENTAL STUDIES										
COURSE CATEGORY: BS&AE	1	1	0	2	2	40	60	0	100	3

SUBJECT OBJECTIVE

The main objectives of the course are:

- To create awareness and improve knowledge about environment
- To conserve natural resources through sustainable use
- To prevent, control of pollution and protect environment
- To develop skill and participation in environment protection activities

LEARNING OUTCOME

After the completion of the course, students shall have a better:

- Understanding , awareness and knowledge of environment and related issues
- Developed skill to resolve many interrelated problems of socio- economic nature and ecology
- Understanding to conserve natural resources and sustainable use.
- Understanding of environmental protection.

MODULE 1

Environment and Natural Resources

Environment: Components of environment, ecosystem, energy flow, material cycle (Nitrogen and Carbon), food chain, and food web, ecological pyramids, population dynamics and prey – predator interaction. Environmental impact assessment (EIA): Definition, concept, Elements of EIA, prediction of impacts, methodology, sustainable development. Natural resources: Renewable and non-renewable natural resources, drinking water quality, water borne and water induced diseases, Arsenic and fluoride problem in drinking water, deforestation, impact of over exploitation of mineral resources. Energy Resources: conventional and non conventional energy resources, solar energy, hydro power energy, hydrogen energy, geo- thermal energy , bio-mass energy, nuclear energy, Fossil fuels.

MODULE 2


Environment Pollution and Current Environmental Issues

Environmental pollution: Definition, pollutants, sources, causes, effects and control measures of air, water, noise, soil pollutions. Solid waste management: Solid waste source, characterization, effects and control measures of urban and industrial waste. Waste water treatment. Current environmental issues: population growth, logistic curve equation, climate change, global warming, acid rain, ozone layer depletion, threats of bio-diversity and its conservation, nuclear hazards. Rain water harvesting, natural disaster and its management. Environment protection: Legal aspects of environment protection, environment protection act, air (prevention and control of pollution) act, water (prevention and control).

REFERENCE BOOKS

1. Agarwal, K.C.2001 Environmental Biology, NidiPubl.Ltd. Bikaner.
2. BharuchaErach, The biodiversity of India, Mapin Publishing pvt. Ltd., Ahmedabad-380013, India.
3. Brunner R.C., Marine Pollution, ClandersonPross Oxford (TB)
4. Cunningham, W.P.Cooper, T.H. Gorhani, E & Hepworth, M.T.2001, Environmental Encyclopedia, JaicoPubl, House, Mumbai, 1196p.
5. De A.K., Environmental Chemistry, Wiley Eastern Ltd. Down to Earth, Centre for Science and Environment ®


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COURSE CODE:AR1151(1)	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-ELECTIVE-I										
COURSE CATEGORY-ECPE	1	0	1	2	2	50	0	50	100	-

ARTS/ PERFORMING ARTS PROJECT-I

SUBJECT OBJECTIVE

- To embed stronger and more enduring means of evoking architecture and culture.

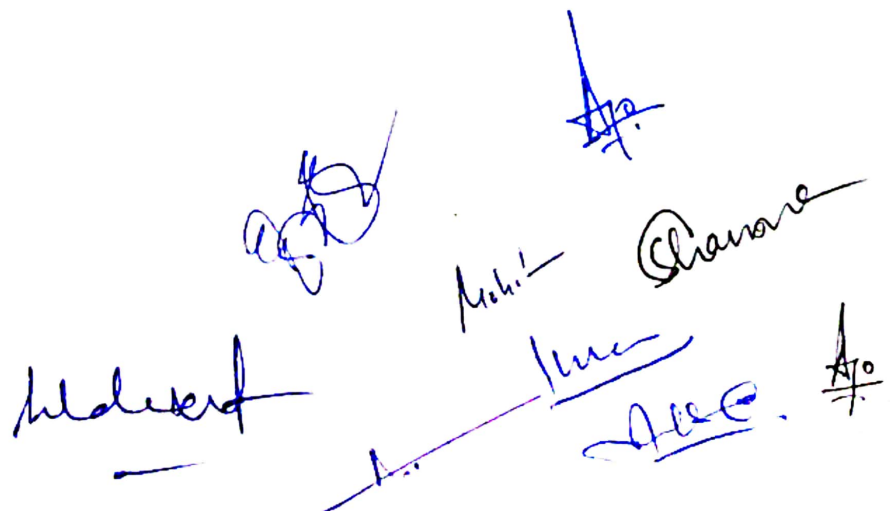
LEARNING OUTCOME

- Students will perform different cultural activities in coordination with the stream of Architecture being taught in their respective semesters.

MODULE

Exercises on topic of Architectural interest like debate, skits, extempore, presentation, theatrical exercises, set design, screenplay writing, movie making, scrip writing - individually or in groups to develop their communication skills, using theater as a medium. It will also train the students towards team building.

NOTE: The course will commence in collaboration with artists of different concerned fields.



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COURSE CODE: AR1151(2)	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-ELECTIVE-I	1	0	1	2	2	50	0	50	100	-
COURSE CATEGORY-ECPE										

ARCHITECTURAL COMPETITIONS-I

SUBJECT OBJECTIVE

- To provide a wide range of design solution for creating interest in role of architecture in national and international design competitions.

LEARNING OUTCOME


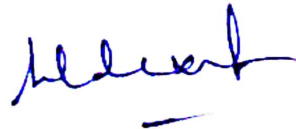
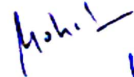
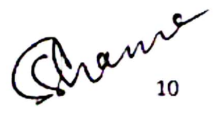


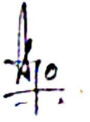
- Understanding of Contemporary Architecture.
- Development of idea of Team Work.
- The student will learn to formulate architectural concept and learn to work in time frame scenario.

MODULE-1

Students will participate in different national and international competitions introduced by Architects, Architectural, colleges, firms, forums and NGO's. Council of Architecture, NASA, Zonal NASA, etc.

The students will formulate the scheme under the guidance of faculty mentors and prepare basic design layout and competition requirements.

The students will have hands on practice of the rendering techniques.

COURSE CODE: AR1151(3)	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESF	P/V	TOTAL	Exam Hrs
COURSE NAME-ELECTIVE-I	1	0	1	2	2	50	0	50	100	-
COURSE CATEGORY-ECPE										

FOREIGN LANGUAGE-I (FRENCH/GERMAN)

SUBJECT OBJECTIVE

- This course teaches the students to express themselves in basic French/German and familiarizes them with the present tense.
- Students will be able to engage in basic conversation in French and will be able to frame sentences using negation, interrogation, etc.

LEARNING OUTCOME

- After completing these modules, the students will be capable of constructing sentences with possessive and demonstrative adjectives in French/German
- In addition they will be proficient in formulating meaningful sentences as they will be capable of applying their knowledge of all the irregular verbs they have learnt during the session.
- They will also have an idea of French/German culture by studying about various French/German festivals.

MODULE

- Brief Introduction to French/German Language-Presenting oneself ,Getting information about someone else, Greeting and taking leave, Asking/giving personal information
- Pronouncing and writing numbers in French, spell and count numbers, telling the time etc.
- Describing a person, Identifying a person, object and place, Describing relation in a family, a specific person, object and place
- Description of objects, people and places, speaking about one's professions expressing and actions using -err ending verbs
- Explanation of the usage & conjugation of pronominal (reflexive) verbs in present tense
- Interview, giving a positive or negative reply, asking questions, discussion with a person

REFERENCE BOOKS

A Propos - A1, Livre de l'élève et Cahier d'exercices

Usborne publishing Ltd-German for Beginners(Usborne language for Beginners)


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COURSE CODE: AR1151(4)	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-ELECTIVE-I										
COURSE CATEGORY-ECPE	1	0	1	2	2	50	0	50	100	-

ART APPRECIATION

SUBJECT OBJECTIVE

- To explore visual art forms and their cultural connections for the student with little experience in the visual arts.
- It includes a brief study of art history and in depth studies of the elements, media, and methods used in creative processes and thought.

LEARNING OUTCOME

- Students will be able to develop the concepts of art forms and in conjunction also developed the visual art forms of different ages of civilizations.

MODULE

- To introduce the vocabulary of art constituted by its elements (line, shape, form, space, color, light, value, texture) and principles (unity, variety, harmony, rhythm, balance, proportion, emphasis, contrast, movement)
- A concise study of evolution of art production from prehistoric beginnings to classical to modern art. New directions in art thru' various-isms such as impressionism, fauvism, expressionism, cubism, Dadaism, surrealism, futurism, constructivism, de stijl, abstract expressionism, pop art and new emerging forms of artistic expression.
- A concise study of art production in India. Important works from art traditions from Indus Valley Art- Hindu, Buddhist and Jain art – Mughal and Rajput miniatures – art during the colonial period - modern Indian Art.
- Learning 'appreciation' through the technique of 'critique'. An initiation to verbal and written expression of experiencing various art forms (culinary art, cinema, theatre, performing arts such as vocal and instrumental renditions, various dance forms etc).
- Appreciating a work of architecture by analysis of work of an architect. Or a local built environment for synthesis of art in architecture.

REFERENCE BOOKS

1. Ching, Francis D. K. "Architecture: Form, Space and Order", John Wiley and Sons Inc.
2. Lidwell, William, Holden, Kestina, Butler, Jill, "Universal Principles of Design", Rockport – Publications, Massachusetts.
3. Broadbent, G. (1973). Design in Architecture - Architecture and Human Science. New York: John Wiley and Sons.
4. Chauhan, P. (2005). Learning Basic Design. Mumbai: Rizvi College of Architecture.
5. Design Drawing. Hoboken: John Wiley & Sons.
6. Roger, K. L. (1998). Architect? A Candid Guide to the Profession. Cambridge: The MIT Press.
7. Rasmussen, S. (1962). Experiencing Architecture. 2nd Rev. Ed. Cambridge:









COURSE CODE: AR1151(S)	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME - ELECTIVE-I	1	0	1	2	2	50	0	50	100	-
COURSE CATEGORY-ECPE	1	0	1	2	2	50	0	50	100	-

PHOTOGRAPHY

SUBJECT OBJECTIVE

- To develop basic photography skills
- To acquaint students to various equipments and technology used in photography
- To educate students with techniques for better frame selection
- To encourage to participate in nation and international architectural competition.

LEARNING OUTCOME

- Students will be exposed to a variety of analog and digital photographic techniques.
- Students will understand the relationship between digital and film based photographic practice and is able to move freely throughout the medium.
- Students will be introduced to contemporary and historic photographers and their images.

MODULE

- Addressing photographic theory, technical issues, applications composition, practice and history. History of photography- Pinhole Camera, Camera Obscura, Normal Human Eye and Process of Seeing-Human eye and camera
- Introduction to advanced film photography, digital photography, video and film making. Learning how to elevate photography by appreciation of art by providing a better understanding on how to use mediums of photography.
- Camera principles- Compact cameras and SLR's - Working of SLR camera - understanding different parts of SLR camera
- Creative mode and basic modes in SLR camera
- Basic features of SLR camera: Focusing- Aperture-shutter speed-slow and fast shutter speeds, applications of slow and fast shutter speeds, ISO, when to use ISO function.
- Angle of view- Different types of lenses-normal lens, wide angle lens, fish eye lens, prime lens, telephoto lens.
- Depth of Field-Shallow depth of field, large depth of field, Depth of focus
- Different camera accessories

REFERENCE BOOKS

1. Capturing the Moment: Inspiration and Techniques for the Modern Photographer_by Sarah Wilkerson
2. History of Photography: From 1839 to the Present__by Beaumont Newhall
Understanding Exposure: How to Shoot Great Photographs with a Film or Digital Camera by Bryan Peterson
3. A World History of Photography_by Naomi Rosenblum

COURSE CODE: AR1151(6)	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME- ELECTIVE-I										
COURSE CATEGORY: ECPE	1	0	1	2	2	50	0	50	100	-

ARCHITECTURAL PRINTING

SUBJECTIVE OBJECTIVE

- To familiarize the student with the importance of calligraphy.
- To introduce the students to different types of calligraphy tools
- To development perception and presentation of calligraphy skill

LEARNING OUTCOME

- Upon the completion of the course the student will understand the purpose, benefits of calligraphy and will be well versed with the calligraphy tools.

MODULE

Introduction about calligraphy its purpose and benefits.

Reason for calligraphy invention and its historic importance.


Famous calligrapher and their work

Tools used: quill, dip pen, ink brush, fountain pen, etc.

Presentation sheets of italic calligraphy, fancy calligraphy, gothic calligraphy, roman calligraphy, etc.


REFERENCE BOOKS

1. Lettering for architects and designers by Martha Sutherland
2. Learn Calligraphy by Margret Shepherd


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COURSE CODE:AR1152	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME- WORKSHOP										
COURSE CATEGORY-PC	0	0	2	2	1	50	0	50	100	-

SUBJECT OBJECTIVE

- To acquire the skill in constructing three dimensional forms using different model making materials and equipment in different scale.

LEARNING OUTCOME

- Understanding different type of materials and its feasibility in model making.

MODULE

- Presentation of modeling Skills by the use the tools with precision.
- Techniques for preparation of presentation models.
- General information and practice with different finishing material.

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COURSE CODE: AR1153	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME: COMMUNICATION SKILLS	1	1	0	2	2	50	0	50	100	-
COURSE CATEGORY: PAEC/SEC										

SUBJECT OBJECTIVE

- To develop in students communicative, writing and presentation skills.
- To enable them to record, report, analyze, evaluate and understand architecture, both in its theoretical and practical form.

LEARNING OUTCOME

- The students will be equipped with good spoken and written skills in english, awareness and skills about various intellectual gatherings and business presentation skills, advertising, journalism for media and architectural journalism.

MODULE-1

Revision Sentence, Phrase, Clause and parts of speech - Noun-gender, Number case, Pronoun-personal' reflexive, Emphatic, Demonstrative, Indefinite, Distributive, Reciprocal, Adjective, Article, Preposition, Conjunction and Interjection. Vocabulary, Word building and word formation, Phrases and idioms, Proverbs, Reading a dictionary, using a thesaurus.

MODULE-2

Composition and Comprehension Essay, Story and letter writing, Summarizing, Comprehension - unseen passages.

MODULE-3

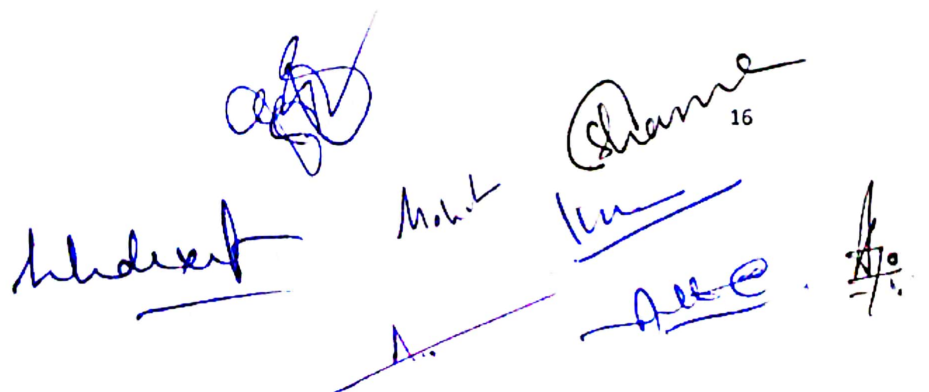
Introduction to types of communication, methods.

MODULE-4

Effective presentation strategies, effective speaking, types of speaking. Introduction of practical language lab. Presentation with electronic aids.

REFERENCE BOOKS

1. Raman Meenakshi and Sharma Sangeeta, "Technical Communications – Principles and Practices", Oxford University Press, New Delhi.
2. Effective technical Communication by M. Ashraf Rizvi Pub: Tata McGraw Hill (2009)
3. Developing Communication Skills by Krishna Mohan Pub: Mac Millan India Limited (2009)
4. An approach to Communication Skills by Indrajit Bhattacharya Pub: Dhanpat Rai Co.Pvt.Lt New Delhi (2007)
5. Handbook of practical Comm. Skills by Wright, Chrissie, Pub: Jaico Publishing house. Mumbai (2007)
6. The skill of Communicating by Bill Scott. Jaico Publishing House, Mumbai (2009).



COURSE CODE:AR1154	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-HUMANITIES	1	0	0	1	1	50	0	50	100	-
COURSE CATEGORY-BS/AE										

SUBJECT OBJECTIVE

- To expose the students to the relationship between man and environment.
- To familiarize the students with basic concepts, theories and issues of humanities and its relevance to architecture

LEARNING OUTCOME

- Upon the completion of the course the students will develop skill in writing and critical reading.
- To reason about being human and to ask questions about our world.
- To understand others through their language, histories and culture

MODULE-1

Introduction Story of Sociology, Sociology and Architecture, Basic concepts of society - Group, Community (Rural and Urban), Association, Institution.

MODULE-2

Culture and Society Concept of culture, Cultural identity, Cultural diversity, Cultural change.

MODULE-3

Process of socialization, types of society. Pre-modern - hunter's and gatherer's, pastoral agrarians and traditional states. Modern, third world / traditional society.

MODULE-4


Social Demography Population growth, Population subsistence & Migration.

MODULE-5

Social Institutions Family, Marriage, Religion.
Social Infrastructure Education, Health, Recreation.

REFERENCE BOOKS

1. An Introduction to Sociology by Vidya Bhushan and D.R. Suchdeva
2. Sociology: A Systematic Introduction by Harry M. Jhonson
3. Indian Society and Culture – Continuity & Change by Nadeem Husnain
4. Principles of Population Studies by Asha A. Bhende & Tara Kanitkar


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COURSE CODE: AR1201	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME: ARCHITECTURAL DESIGN-II	2	3	0	5	6	40	60	--	100	6
COURSE CATEGORY: PC										

SUBJECT OBJECTIVE

- To understand human activity and spaces required for activities.
- To understand basic building components and their dimensions.
- To appreciate the elements in architectural design of single unit built-up structures.
- To explore Field trips to relevant sites for all assignments.

LEARNING OUTCOME

Upon the completion of the semester the students will

- Understand architectural design as a process and as a final product.
- Understand fundamentals of space, form and order as basic architectural skills. To involve students in a design project that will involve simple space planning and the understanding of the functional aspects of good design; to enable the students apply theoretical knowledge learnt in the previous semester in architectural design exercise.

MODULE-1

Anthropometrics Studies

Studies and introduction to human dimensions and functions, Space-activity relationships.

MODULE-2

Living Spaces and Building

Measuring, Drawing and dimensioning of simple building components. Designing for basic functions of human beings, e.g. living, eating, sleeping, cooking, bathing and toilet etc.

MODULE-3

Building Design

Design of mono-cellular-unit/structure on a level plane, designing of simple activity spaces, designing of multiple but simple activity spaces involving primarily horizontal circulation.

SUGGESTED STUDIO EXERCISES


Design of a small space single storied load bearing structures such as Milk booths, Bus shelters, Florists shop, Post-Office, Crèche, Dispensary etc.

Study models of different materials viz. paper, clay, wax, soap, wires, POP etc.

NOTE: Compilation of all architectural design projects in the form of report/fact-file. Submission should be done in hardcopy as well as in softcopy (PowerPoint presentation/Photoshop presentation)

REFERENCE BOOKS

1. Ching, Francis D. K. "Architecture: Form, Space and Order", John Wiley and Sons Inc.
2. Lidwell, William, Holden, Kestina, Butler, Jill, "Universal Principles of Design", Rockport – Publications, Massachusetts.
3. "Neufert Architect's Data", Blackwell Publishing.
4. Donald Watson and Michael J. Crosbie, "Time – Saver Standards for Architectural Design, Technical Data for Professional Practice", McGRAW – HILL


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COURSE CODE-AR1202	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-BUILDING CONSTRUCTION&MATERIALS-II	1	0	0	1	2	40	60	--	100	3
COURSE CATEGORY-BS&AE										

SUBJECT OBJECTIVE

- To acquaint the students to usage of building materials such as Timber and Hardware, Damp Proofing Courses and Cement Concrete.
- To familiarize the students with construction techniques for use of the above materials in building works. and joinery in carpentry
- To familiarize the student with the basic building construction practices on site/yard.

LEARNING OUTCOME

- Students will be able to explore on various building materials and construction techniques based on the performing standards and codes, wherein application of each material would be discussed in detail, both in the context of historical and contemporary methodology.
- Students will be able to know usage of new technology/materials.
- Students will be able to know the application of foundation, lintel, sunshades, window/door openings, walling material, and floor & flooring and culminating at roof and parapet wall.

SECTION – A, BUILDING MATERIALS AND SCIENCES

MODULE-1

Timber Classification, Characteristics, Defects, Preservation.
D.P.C Asphalt, Bitumen, Synthetic : , etc.

MODULE-2

Reinforced Cement Concrete: Types, Mixing, Curing, Water Cement Ratio, Qualities and Workability.
Reinforced Brick Work: Types, Mixing, Curing, Water Cement Ratio, Qualities and Workability.

LIST OF ASSIGNMENTS (Market Surveys, Seminars & Report)

- To study the availability, constituents, properties, manufacturing processes, storage, transportation and applications of above mentioned materials.
- To visit Timber depot/Ready mix concrete plants etc. for better understanding and submit report. WORKSHOP/CONSTRUCTION YARD PRACTICE & SITE EXPOSURE

MODULE-3

Workshop / Construction Yard Practice: Practicing in construction yard by making the examples of brick masonry works, Carpentry works, etc.
Site Exposure: Exposure to building construction practices on site of various items of work from foundation to roof and finishes.

SECTION – B, BUILDING CONSTRUCTION TECHNOLOGY

MODULE-4

Brick Work
Arches in brick and stone, Elementary principles, Centering
Corbelling, Coping, String courses, Brick jalis
Special Bonds - Rat Trap Bond

MODULE-5

Timber: Elementary carpentry, Common joints
Details of framed, ledged, braced and batten doors.
D.P.C.: Horizontal and vertical D.P.C.

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LIST OF ASSIGNMENTS

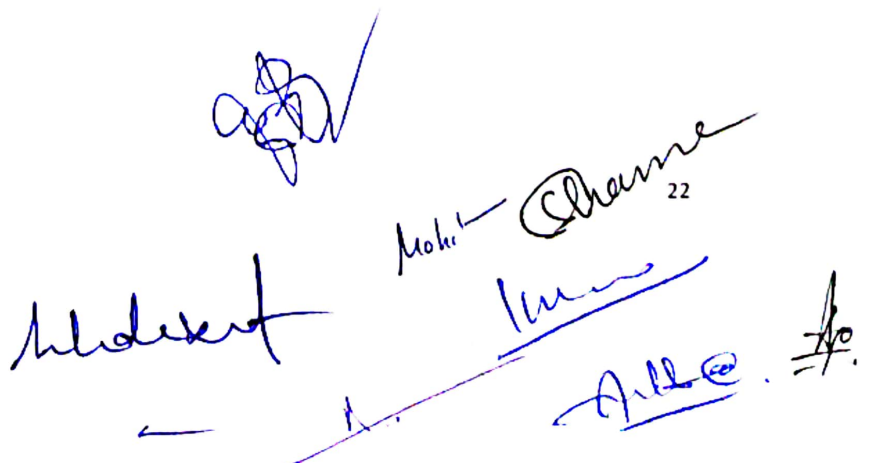
1. To study the various tools, equipments used in masonry and carpentry works.
2. To construct examples of brick masonry works in construction yard.
3. To construct examples of timber joints in workshop and study the various hardware commonly used in doors.
4. To survey construction work on site and submit report

CONSTRUCTION PLATES

1. To understand the terminology of arches and the various type of arches in brick.
2. To understand Corbelling, Coping, String Courses, Brick jalis.
3. To understand Special Bonds - Rat Trap Bond.
4. To understand various types of joints in timber.
5. To understand wooden Framed, Ledged, Braced and Batten Door.
6. To understand horizontal and vertical DPC for load bearing walls.

REFERENCE BOOKS

1. McKay, W.B., "Building Construction Volume I, II, III and IV", Longmans, 1955.
2. Ching, Francis D. K. and Adams, Cassandra, "Building Construction Illustrated", Wiley and Sons, 2000.
3. The Construction of Buildings – Barry Volume I, II, III and IV
4. Chudley, Roy, "Construction Technology", Longman, 2005.
5. Building Construction Mitchell (Elementary and Advanced)
6. Rangwala, S. C., "Building Construction", Charotar Publishing House, 2007
7. Building Construction-Bindra&Arora.
8. Punmia B. C., Jain A. J., and Jain A.J., Building Construction, Laxmi Publications, 2005.
9. Building Materials by SC Rangwala: Charotar Pub. House, Anand
10. M. Gambhir, NehaJamwal, Building Materials Products, Properties and Systems, Tata McGraw Hill Publishers, New Delhi, 2011.
11. R.K.Gupta, Civil Engineering Materials and Construction Practices, Jain brothers, New Delhi, 2009.
12. National Building Code of India 2005, Bureau of Indian Standards, 2005.
13. Engineering Materials-Deshpande.
14. Engineering Material-Roy Chowdary
15. Designing with models – Criss. B. Mills.
16. Morris, M., "Architecture and the Miniature: Models", John Wiley and Sons, 2000.
17. Mills, Criss B., "Designing with Models: A Studio Guide to Making and Using Architectural Models", Thomson and Wadsworth, 2000.
18. Raghuwanshi, B.S., "A Course in Workshop Technology - Vol. I and II", Dhanpat Rai and Co, 2001.
19. Wenninger (Magrus.J.) Spherical Models, Cambridge University Press, 1979

Handwritten signatures and initials in blue ink at the bottom of the page. The signatures include 'Mohi', 'Shame', '22', 'A. B.', and 'A. B. @'. There are also some scribbles and a small mark resembling a star or a stylized 'A'.

COURSE CODE:AR1203	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-ARCHITECTURAL STRUCTURE-II	1	1	0	2	2	40	60	0	100	3
COURSE CATEGORY-BS&AE										

OBJECTIVES

- To understand the forces in members the mix design of concrete and deflection in beams due to forces and forces in columns.
- To understand the different types of loads and supports in building structural components.

LEARNING OUTCOME

- To equip the students with necessary mathematical background to comprehend the aspects of design elements and structural stability.
- Students will able to understand Beams, columns

MODULE-1

Stresses in Trusses Definitions, Forces in members, Analytical method, Method of sections, Graphical method and Link polygon.

MODULE-2

Torsional Stress, Simple cases.

MODULE-3

Plain Concrete, Concrete mix, Curing and strength of concrete, Effect of temperature, Shrinkage, Fatigue.

MODULE-4


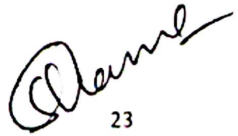
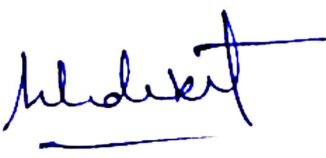



Deflection of Beams, Double Integration, Moment area, Method consistent deformation.

MODULE-5

Column Definition, End conditions, Buckling and critical loads, Slenderness ratio, Various column theories.

REFERENCE BOOKS

1. Nautiyal B. D., "Introduction to Structural Analysis", B.H.U.
2. Punmia P. C., "Strength of Materials & Mechanics of Structures".
3. Khurmi R. S., "Strength of Materials".
4. Senol Utku , "Elementary Structural Analysis".
5. Ramamarutham S., "Strength of Materials".


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COURSE CODE-AR1204	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-ARCHITECTURAL DRAWING-II	1	1	3	5	4	40	60	0	100	3
COURSE CATEGORY-PC										

OBJECTIVES

- To familiarize the student with theoretical, practical and pictorial aspects of architectural drawing.
- To develop perception and presentation of simple architectural forms and buildings.

LEARNING OUTCOME

- Students will be able to understand different types of projections.
- Students will be able to know perspective drawings and their representations.

MODULE-1

Metric Drawing- types, uses and advantages. Isometric, axonometric and oblique view.

Metric drawing and projection and their dimensioning.

Metric drawing of planes

Metric drawing of solids (prism, pyramid, cone, cylinder, frustum, truncated)

Metric drawing of circles and curved surface.

Metric drawing of simple & complex blocks.

MODULE-2

Perspective Drawing- Purpose and use.

Differences with metric projections.

Perspective elements (centre of vision, station point, picture plane, horizontal plane, horizon line, ground plane, ground line, perpendicular axis .etc)

Types of perspective (one point & two point)

Perspective of simple & complex blocks.

MODULE-3

Shades and Shadows

Value in shade & shadow

Shade and shadow in plan (of point, line & plane)

Shade and shadow in elevation (of point, line & plane)

Shade and shadow in plan & elevation (of point, line & plane)

Shade and Shadow in solid & complex blocks.

Short cut method for constructing shadow

Presentation Techniques in Sciography

REFERENCE BOOKS

1. IH. Morris, Geometrical Drawing for Art Students - Orient Longman, Madras, 2004.
2. Francis Ching, Architectural Graphics, Van Nostrand Rein Hold Company, New York, 1964.
3. N.D.Bhatt, Elementary Engineering Drawing (Plane and Solid Geometry), Charotar Publishing House, India.
4. George K.Stegman, Harry J.Stegman, Architectural Drafting Printed in USA by AmericanTechnical Society, 1966.
5. C.Leslie Martin, Architectural Graphics, The Macmillan Company, New York, 1964.
6. Introducing AutoCAD and AutoCAD LT – GeorgeOmura.
7. Mastering AutoCAD - GeorgeOmura 8. AutoCAD 2013 and AutoCAD LT 2013 "BIBLE" - Ellen Finkelstein.

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COURSE CODE:AR1205	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	I/S	T	P/V	HOURS	CREDIT	CIA	FSF	P/V	TOTAL	Exam Hrs
COURSE NAME- VISUAL ARTS-II	1	0	2	3	2	40	60	0	100	3
COURSE CATEGORY-PC										

SUBJECT OBJECTIVE

- To develop free hand skills - Drawing people and transport from imitation, observation recapitulation.
- To develop Rendering Techniques – rendering architectural drawings.

LEARNING OUTCOME

- Students will develop art and graphic skills

MODULE-1

Free hand sketching and drawing: still life, human figure - free-hand average measurements of human body in different postures, its proportion and graphic representation, application in design of simple household and street furniture.

Sketching of water, stone and other natural textures.

4 wheelers like car, bus, truck etc.

MODULE-2

Advanced rendering skills and painting techniques like textures, materials, finishes using various equipments like poster colour, charcoal etc.

MODULE-3

Mural making and 3d sculpture: Mural with different materials on live scale, Sculpture with different materials like P.O.P, brick, cement, waste material etc.

REFERENCE BOOKS

1. Francis D. K. Ching, 'Architecture: Form, Space and Order', John Wiley & Sons, Incorporated, 2007
2. Arnold Dana, "Art History – A Very Short Introduction", Oxford University Press.
3. Stallabrass, Julian, "Contemporary Art – A Very Short Introduction", Oxford University Press.
4. Landscape Graphics: Plan, Section, and Perspective Drawing of Landscape Spaces by Grant Reid.
5. Rendering with pen and ink by Arthur L. Guptill.

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COURSE CODE: AR1206	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESF	P/V	TOTAL	Exam Hrs
COURSE NAME: HISTORY OF ARCHITECTURE & CULTURE I (ANCIENT CIVILIZATION)										
COURSE CATEGORY: PC	1	1	0	2	2	40	60	0	100	3

SUBJECT OBJECTIVE

- To inform about the development of architecture in the ancient western world and the cultural and contextual determinants that produced that architecture.
- To understand architecture as evolving within specific cultural contexts including aspects of politics, society, religion and climate.
- To gain knowledge of the development of architectural form with reference to technology, style and character in the prehistoric world and in ancient Egypt, West Asia, Greece and Rome.

LEARNING OUTCOME

- The student will have an insight in to the architecture of prehistoric period and early civilizations.
- Social, religious and political character, construction methods, building materials and how they influenced their built form and settlement pattern shall be explained with suitable examples.
- Combined influence of geology, geography, climate, beliefs, religion and culture on the architecture must be highlighted so as to appreciate how architecture is embedded in place specific context.
- The study will enable students to do a comparative evaluation of various civilizations, appreciate chronological developments along the timeline and across geographies

MODULE-1

Prehistoric age

Introducing concepts of culture and civilization - Paleolithic and Neolithic culture - art forms and evolution of shelter - megaliths - agricultural revolution and its impact on culture and civilization with examples from Carnac and Stonehenge.

Birth of Civilization In reference to the Asia-minor region with nascent cities like Jericho, Catalhoyuk, and Hattasus etc.

MODULE-2

Ancient River Valley Civilizations Egypt: Landscape and culture of Ancient Egypt- history - religious and funerary beliefs and practices - monumentality tomb architecture: evolution of the pyramid from the mastaba – Great Pyramid of Cheops, Gizeh etc. Temple architecture: mortuary temples and cult temples - Temple of Ammon Ra, Karnak, Khons - Temple of Abu Simbel (Rock Cut) etc.

MODULE-3

Ancient River Valley Civilizations: Mesopotamia Evolution of the ziggurat - Ziggurat of Ur, Urnamu etc., Evolution of the palaces - Palace of Sargon, Khorsabad.

Rome Orders in architecture: Tuscan and Composite, Domestic architecture – structural forms, materials and techniques of construction.

Ancient River Valley Civilizations: Mesopotamia Urbanization in the fertile crescent - Sumerian, Babylonian, Assyrian and Persian culture, Evolution of city-states and their character, law and writing , theocracy and architecture - Ninveh, Khorsahbad, Marie, Babylon etc.

MODULE-4

Indus Valley civilization: Particularly in reference to the town planning principles exemplified with examples from Mohenjodaro and Harappa.

The Aryan civilization: With its emphasis on the Vedic town plan, its motifs and patterns.

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REFERENCE BOOKS

- 1 Spiro Kostof - A History of Architecture - Setting and Rituals, Oxford University Press, London, 1985.
2. Leland M Roth; Understanding Architecture: Its elements, history and meaning; Craftsman House; 1994
3. Pier Luigi Nervi, General Editor - History of World Architecture - Series, Harry N. Abrams, Inc. Pub., New York, 1972.
5. S Lloyd and H.W. Muller, History of World Architecture - Series, Faber and Faber Ltd., London, 1986.
8. Gosta, E. Samdstrp, Man the Builder, Mc.Graw Hill Book Company, New York, 1970.
7. Webb and Schaeffer; Western Civilisation Volume I; VNR: NY: 1962
10. Vincent Scully: Architecture; Architecture - The Natural and the Man Made: Harper Collins Pub: 1991.
9. Brown, P. (2010). Indian Architecture: Buddhist and Hindu period. Mumbai : D.B. Taraporevala Sons and Co.

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COURSE CODE: AR1251(1)	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-ELECTIVE-II	1	0	1	2	2	50	0	50	100	-
COURSE CATEGORY-ECPE										

ARTS/PERFORMING ARTS PROJECT-II

SUBJECT OBJECTIVE

- To amalgamate Architecture and Culture and to discover how culture has its impact on Architecture.

LEARNING OUTCOME

- Students would be able to discover cultural Heritage with respect to Architecture.

MODULE

The students shall be asked to study the cultural heritage as well as the Contemporary Architecture and present it through physical and theatrical exercises individually and in groups. The final outcome would be to come out with the relationship of culture with Architecture.



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COURSE CODE: AR1251(2)	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-ELECTIVE-II	1	0	1	2	2	50	0	50	100	-
COURSE CATEGORY ECPE										

ARCHITECTURAL COMPETITIONS-II

SUBJECT OBJECTIVE

- To provide a wide range of design solution for creating interest in role of architecture in national and international design competitions.

LEARNING OUTCOME


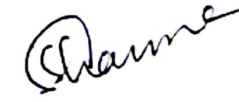
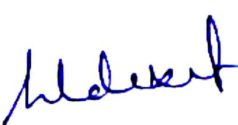
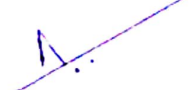

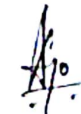
- Understanding of Contemporary Architecture.
- Development of idea of Team Work.
- The student will learn to formulate architectural concept and learn to work in time frame scenario.

MODULE-1

Students will participate in different national and international competitions introduced by Architects, Architectural colleges, firms and forums NGO's. Council of Architecture, NASA, Zonal NASA, etc.

The students will formulate the scheme under the guidance of faculty mentors and prepare basic design layout and competition requirements.

The students will have hands on practice of the rendering techniques.


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COURSE CODE: AR1251(3)	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	T/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME- ELECTIVE-II										
COURSE CATEGORY- LCPE	1	0	1	2	2	50	0	50	100	-

FOREIGN LANGUAGE-II (FRENCH/GERMAN)

SUBJECT OBJECTIVES

- To explain the students to apply their knowledge of possessive & demonstrative adjectives in the present and near future tense, in conversation- using different groups of verbs.

LEARNING OUTCOME


- After completing these modules, the students will be capable of constructing sentences with possessive and demonstrative adjectives in French/German.
- In addition they will be proficient in formulating meaningful sentences as they will be capable of applying their knowledge of all the verbs they have learnt during the session.
- They will also have an idea of French/German culture by studying about various French/German festivals.

MODULE

- Revision of earlier modules.
- List & usage of possessive adjectives Frame sentences using possessive adjectives
- Exercises based on possessive adjectives
- Family tree List and usage of demonstrative adjectives
- Frame sentences using demonstrative adjectives
- List & conjugation of pronominal verbs in present tense Frame sentences using pronominal verbs
- List & usage of irregular verbs
- Letter writing.

REFERENCE BOOKS

- A propos A1- Livre d'élève et Cahier d'exercice
- Apprenons la grammaire ensemble, Dictionnaire Larousse , Mon livre de français - 2, 450 exercices de grammaire
- Collins 3 in 1 French grammar, vocabulary & verbs
- Notes prepared by ASFL French faculty members



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COURSE CODE: AR1251(4)	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-ELECTIVE-II										
COURSE CATEGORY-ECPE	1	0	1	2	2	50	0	50	100	-

GRAPHIC DESIGN-I

SUBJECT OBJECTIVE

- There is a dramatic change in the way a graphic design in architecture works.
- This subject prepares students to take on all new context challenges advancements in the field of Visual Communication.

LEARNING OUTCOME


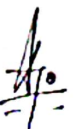
- An architecture student, in addition to a thorough grounding in design abilities and theoretical aspects, undertakes the study of the cultural and historical context in which architects need to function, as well as of the social and ethical factors that influence design decisions.
- The ultimate aim is to stimulate the development of independent critical judgment, sound research skills, the ability to think creatively and practice design as a professional.

MODULE

Color Terminology, Inspiration & Design Development, Mood, theme & color inter-relationship, Natural & Geometrical Form, Innovation in Design, Principles of Composition, Optical Illusion, Theme Development, Picture Analysis, Visual Logic, Good Design vs. Bad Design, Expression & Emotion, Exercises on imagination, Lateral Thinking, Story pictures, Developing Observation

REFERENCE BOOKS

1. Graphic Design: The New Basics by Ellen Lupton
2. Thinking with Type by Ellen Lupton
3. Making and Breaking the Grid: A Graphic Design Layout Workshop by Timothy Samara
4. The Elements of Graphic Design: Space, Unity, Page Architecture, and Type by Alex W. White


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COURSE CODE: AR1251(5)	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-ELECTIVE-II	1	0	1	2	2	50	0	50	100	-
COURSE CATEGORY-ECPE										

PUBLIC SPEAKING

SUBJECT OBJECTIVE

- To make students understand the process of communicating information to an audience and sharpening their critical thinking and verbal/non-verbal communication skills.

LEARNING OUTCOME

Upon completion of the syllabus, students will be able to

- Compare and contrast public speaking with casual conversation
- Develop an effective and purposeful speech
- Strategize to eliminate hesitation associated with public speaking

MODULE

Inculcate confidence with ample practice through mock interviews with the client (hypothetical).
Introduce various design problem briefs and hold group discussions in forms of debates

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COURSE CODE: AR1251(6)	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-ELECTIVE-II	1	0	1	2	2	50	0	50	100	-
COURSE CATEGORY-ECPE										

ARCHITECTURAL VOCABULARY

SUBJECT OBJECTIVE

- To train students to have a comprehensive knowledge of the terms used in architecture.
- To be able to connect the modern architectural elements with the classical architectural terms.

LEARNING OUTCOME

- The students will be well versed with the precise usage of technical terminology for the architectural element in discussion.

MODULE

Understand the symbiotic relationship between graphic and verbal communication of the architectural elements; by explaining the elements at hand with consolidation information. Recognize architecture objectively regardless of the subjective meaning or placement of the element at hand.

Understanding the value of architecture as a strong visual art, withholding most power when explained with a solitary word or image.

Architectural elements to be explained in a method comprehensive enough so that they can be easily reflected in a visual context; which will further enrich, explain, and complete the multidimensional nature of their meaning.

Understanding elements which are lend by the surrounding environment, which communicate information drawn out of graphical representations which students are exposed to, from books.

REFERENCE BOOKS

A visual Dictionary of Architecture by Francis. D.K.Ching

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COURSE CODE-AR1252	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-ARCHITECTURAL RESEARCH-I	1	1	0	2	2	50	0	50	100	-
COURSE CATEGORY-PC										

SUBJECT OBJECTIVE

- Understanding basic principles of any research with special reference to architectural research and applications.

LEARNING OUTCOME

- Students will be able to present their work and understand the current market and the industry standard through surveys and will be able to present the same through different presentation modes.

MODULE1

Introduction Importance of architectural research and writing.

MODULE-2



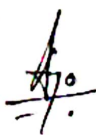
Book Reviews Basics of reviewing a book. Learn how to review architectural book/books

MODULE-3

Technical Writing Language, Impersonal and formal language, Elements of style, Techniques. Report and presentation on ongoing architectural project. The assignments preferably should be associated with the ongoing design assignments and design workshops could be clubbed with research also.

REFERENCE BOOKS

1. Raman Meenakshi and Sharma Sangeeta, "Technical Communications – Principles and Practices", Oxford University Press, New Delhi.
2. Research Methodology by C.R. Kothari.


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COURSE CODE:AR1253	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-SURVEYING & LEVELLING										
COURSE CATEGORY-BS&AE	1	0	2	3	2	50	0	50	100	-

SUBJECT OBJECTIVE

- To equip students with the basic principles and theories which underlie the systematic study of topographic features, basic skills of landform analysis through map and field observation, need and role of Surveying and Leveling related to Architecture, preparation and interpretation of survey drawings, methods, tools and equipment necessary to carryout different survey procedures and recent advancements in the field of landforms survey and measurements.

LEARNING OUTCOME

- Students will be able to understand topographic features, landform through different Instruments.
- Students will be able to understand the importance of surveying in architecture.

MODULE-1

Introduction Definition, classification, principles of surveying.

Reading of survey Maps, understanding of features and undulations of Ground. Scales used in Plotting.

Study of land forms, topography and contours, slope analysis, grading process; graphic representations of landforms.

Units of measurement, Scale, Signs convention.

MODULE-2

Chain Survey Instruments used, Types of chain, Measurements in horizontal plane, linear measurements with chain & tape, setting-out & survey stations, survey accessories, survey lines, open & closed traverse, chaining & offsetting, direct & indirect ranging, log-books, field boundaries, field area estimation. Compass survey, bearings & angles, local attractions, errors in compass survey.

MODULE-3

Plane Table Survey Plane table and accessories, Methods of plane table survey, Radiation, Intersection, Traversing and resection, Two point and three point problems and their solution. Leveling Definition, Classification, Booking and reduction of levels, Profile & cross section leveling, Errors in leveling.

Theodolite Study of instruments, Definition of different terms, Temporary adjustments, Uses, Measuring horizontal and vertical angles, Method of repetition, Extension of lines.

MODULE-4

Contouring Characteristics of contours, Direct and indirect methods of contouring, Interpolation, Uses of contours, Calculation of area & volume

Compass Survey The prismatic compass, Surveyor compass and its construction and uses, Reduced and whole circle bearing, Magnetic declination, Effect of local attraction.

MODULE-5

Traverse Survey Introduction and different methods of traversing, Error of closure.

Total Station Survey Introduction, Working principle of total station and its use. Use of software for different applications.

Photogrammetry Definition, Principles and application of photogrammetry in surveying.

LIST OF ASSIGNMENTS (Field Exercises & Drawings)

1. To find out horizontal distance between two points and plotting the details on lateral side of chain line using chain, tape, ranging rod & cross staff etc.

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2. Two point problem & three point problem.
3. Making L-section & Cross section of a profile.
4. Making grids on ground using theodolite & taking spot level & drawing contour lines.
5. Making a regular polygon in field and finding error of closure using different equipment.
6. Preparing topographical map of given area using total station.
7. Study various aerial images.

REFERENCE BOOKS

1. Surveying Volume I & II by Dr. B.C. Punmia
2. Surveying and Leveling (Part – 1) by Kanetkar TP and Kulkarni SV
3. Surveying Volume -1 by Dr. K.R.Arora
4. Surveying Volume I and II by Dr. S.K. Duggal.


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COURSE CODE: AR1254	SCHEME OF TEACHING					SCHEME OF EVALUATION				
	L/S	T	P/V	HOURS	CREDIT	CIA	ESE	P/V	TOTAL	Exam Hrs
COURSE NAME-NTCC-I (EDUCATIONAL TOUR / DOCUMENTATION+WORKSHOP)	0	0	0	0	1	50	0	50	100	-
COURSE CATEGORY- PAEC/PAECC										

SUBJECT OBJECTIVE:

- To Concepts and ideas through critical thinking.
- To Relate their own ideas with the global scenario and demand.


LEARNING OUTCOME:

- Students will be able to integrate and practice from field works, workshops.

MODULE:

The winter project/ workshop gives the students an opportunity to develop fundamental design skills through hands-on projects based on the curriculum of previous semester. The students will explore and experiment with different techniques in their individual project. Maintaining proper documentation and record through portfolio of their individual creative work.

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