

**Dr. Babasaheb Ambedkar Technological University,  
Lonere, Raigad**

**BACHELOR OF ARCHITECTURE**

**FIRST YEAR**

**SYLLABUS 2017**

**Dr. Babasaheb Ambedkar Technological University**

**First Year Bachelor of Architecture**

**Semester -1**

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10100001	Architecture Design-I	0	6	25	25	50	50	100	250	3
AR10100002	Architectural Drawing and Graphics-1 (Manual)	0	4	25	25	50	50	100	250	2
AR10100003	Building Construction Technology and Materials-I	2	2	25	25	50	50	100	250	3
AR10100004	Environmental Science-I (Focus on Built Form )	2	0	10	10	20	60	0	100	2
AR10100005	History of Architecture-I	2	0	10	10	20	60	0	100	2
AR10100006S	Basic Design and Visual Arts	0	4	30	30	0	0	90	150	2
AR10100007S	Model Making Workshop (Basic)	0	4	20	20	0	0	60	100	2
AR10100008S	Elective (Any -1)	0	4	20	20	0	0	60	100	2
	Personality Development									
	Sketching									
	Art in Public Spaces									
	Craft Studies									
	<b>Total</b>	<b>6</b>	<b>24</b>	<b>165</b>	<b>165</b>	<b>190</b>	<b>270</b>	<b>510</b>	<b>1300</b>	<b>18</b>

## First Year Bachelor of Architecture

### Semester -1

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10100001	Architecture Design-I	0	6	25	25	50	50	100	250	3

#### Course Objective

To introduce the student the fundamentals of architectural design.

To initiate creative thinking and its relationship with activity spaces.

To apply principles of Basic Design and Visual Arts to Architectural Design

To act as an interface between Basic design-1, Workshop-1 and Architectural Design Studio-1

#### Course Outcome

To understand human scale and proportion

Apply human scale and proportion in design

#### Course Content

##### Module-1

Anthropometry

Scale and Proportion

Measured drawing of Human Activity space - Case Study -Living Room, Bedroom, Kitchen, Toilet

##### Module -2

Iterative Design Process

Activities and their relation with space

Principles of Architectural Planning

Co -relation between form, function and structure

##### Module -3

Design process using various methods like Idea Matrix, Concept Mapping and Pre Design

##### Module -4

Design of elements of furniture using Anthropometric data from Module -1

##### Module-5

Design of Interactive spaces such as Living room, Courtyard, Bus Stop, Atrium, Community spaces and similar areas.

#### Studio Exercises

Exercises in order to experiment basic proportions, body relations and spatial concepts.

Layout of furniture based on anthropometrics. Anthropometrics for physically challenged persons. Exercises in order to experiment basic proportions, body relations and spatial concepts. Designing of basic building components (like kitchens, bedrooms, toilets etc.)

Design exercise on threshold conditions and small-scale domestic space. Students will learn skills in problem solving, visualization, oral, and graphic communication. Field trips to relevant architectural sites.

#### Mode of Examination

Theory Paper in the form of Time Problem of duration 4 hours and Sessional Work with Viva

**Reference Books**

1. Ching, F.D.K.; Architecture Form, Space and Order, Van Nostrand Reinhold Staff, New York, 1996.
2. Rudofsky, Bernard; Architecture without Architects, University of New Mexico Press, New Mexico
3. Rasmussen, Steen Eiler; Experiencing Architecture, The MIT Press, Cambridge, Massachusetts, 1977.
4. Watson, Donald / Crosbie, Michael J.; Time Savers Standards for Architectural Design, Mc Graw Hill, New York, 2005
5. Chiara, Joseph De / Crosbie, Michael J.; Time Savers Standards for Building Type, McGraw Professional Publishing, New York, 1973.
6. Harris, Charles W. / Dines, Nicholas T.; Time Savers Standards for Landscape Architecture, Mc Graw Hill, USA, 1998
7. Chiara, Joseph De / Panero, Julius / Zelink Martin; Time Savers Standards for Interior design and Space Planning, Mc Graw Hill, New York, 2001
8. Gideon, Siegfried; Space, time & Architecture, Harvard University Press

## First Year Bachelor of Architecture

### Semester -1

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10100002	Architectural Drawing and Graphics-1 (Manual)	0	4	25	25	50	50	100	250	2

### Course Objective

To introduce and familiarize students with drafting tools and accessories and provide basic knowledge and skill to draft a drawing manually.

Developing drafting skills through different types of lines, their intensity and interpretation. Also understanding the scale of drawing, dimensioning, lettering techniques and layout of sheets.

Visualizing and drawing geometric forms in different positions using orthographic projections and sciography will help the student to understand and develop drawings for various design proposals.

### Course Outcome

To recognize and select drawing tools and techniques for drafting basic drawing.

To identify a type of line, intensity, thickness, text to draw a shape. .

To implement a scale, dimension for a layout of sheet or drawing.

To demonstrate a line, plane or solid into drawing using orthographic projections.

To integrate the 2 dimensional drawings and 3 dimension form using development of surfaces.

To formulate the 2 dimension into 3 dimension drawing using metric projection.

### Course Content

#### Module -1

Introduction

Drawing instruments and its uses

Sheet layout

Lines, lettering , scales and dimensioning

Geometric Shapes

Drawing of basic geometric shapes

Drawing of complex geometric shapes

#### Module -2

Orthographic Projections

Concept, Principle and Methods of Projections

Orthographic Projections of Point, Line and Plane

Projections of Solids in different positions

Application of Projection for preparing architectural drawings

Application of Sciography in 2 dimensional drawings with rendering techniques

**Module -3**

Sections of solids and its application to building drawings

Introduction of section of solids with simple forms

Concept and methods of drawing section of solids

Application of sections for simple building drawings

Section of complex form or structures

**Module – 4**

Development of Surfaces

Introduction to development of surfaces and its uses

Methods of development of surfaces

Development of lateral surfaces of simple solids as cube, cone, pyramids and prism.

Development of complex solids, when two or more simple solids are joined together.

**Studio Exercises**

Suitable exercises on all the Modules mentioned above

**Mode of Examination**

Theory Paper with 3 hour duration.

Sessional Work with Viva.

**Reference Books**

1. Ching Francis D.K.: Architectural Graphics

2. Kelsey W. E.: Geometrical & Building Drawing

3. Leslie Martin: Architectural graphics

4. B. James: Essential of Drafting

5. H. Joseph and Morris: Practical plane and solid geometry

6. Gill Robert: Rendering with pen and ink

7. Burden Ernest: Architectural Delineation.

8. Burden Ernest: Architectural Delineation. Gill, Robert W.; Manual of Rendering with Pen and Ink, Thames and Hudson, London, 1997.

9. JaxThemier, B.W., "How to Paint and Draw", Thames and Hudson, 1985.

## First Year Bachelor of Architecture

### Semester -1

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10100003	Building Construction Technology and Materials-I	2	2	25	25	50	50	100	250	3

### Course Objective

To familiarize students with building elements of superstructure and foundations, materials and construction techniques  
 Introduction to elementary building construction methods and their applications  
 To understand the execution process of each building element

### Course Outcome

To define basic building elements.  
 To recognize the various types of masonry and foundation made up of suitable materials.  
 To be aware of the properties and applications of various materials.  
 To understand the construction of openings in various types of masonry.  
 Distinguish between various types of structures.

### Course Content

#### Module -1

Introduction to materials used in civil construction.  
 Bricks, Sand, Aggregate, Lime, Cement, Water, Stone and reinforcement Steel  
 Properties of materials and Quality tests of materials

#### Module -2

Introduction to various elements of building from foundation to roof.

#### Module -3

Building Envelope  
 Brick Masonry- All types of Bonds  
 Stone Masonry-All types  
 Composite Masonry- All types  
 Right angles in all types of masonry, T-Junctions and Corbelling

#### Module – 4

Arches  
 Various types of Arches  
 Lintels  
 Constructing openings in Walls as mentioned in Module -2

#### Module – 5

Introduction to Types of structures- Load Bearing Structure and Frame Structure  
 Introduction to Types of Foundations- Shallow and Deep foundations  
 Types of Soil  
 Shallow foundations-Isolated, Combined and Raft foundations and Spread Foundations

Deep Foundations- Construction of Grillage foundations, Caisson foundations

Equipment for Deep foundations

### **Studio Exercises**

Suitable exercises on all the Modules mentioned above

### **Mode of Examination**

Theory Paper with 3 hour duration.

Sessional Work with Viva.

### **Reference Books**

1. 'Elements of Structure' by Morgan.
2. 'Structure in Architecture' by Salvadori.
3. 'Building Construction' by Mackay W. B., Vol. 1 – 4.
4. 'Building Construction' by Barry, Vol. 1 – 5.
5. 'Construction Technology' by Chudley, Vol. 1 – 6.
6. 'Building construction Illustrated' by Ching Francis D. K.
7. 'Elementary Building Construction' by Michell.
8. 'Structure and Fabric' by Everet
9. 'Engineering Materials' by Chaudhary.
10. 'Building Construction Materials' by M. V. Naik.
11. 'Civil Engineers' Handbook' by Khanna
12. 'Vastu Rachan' by Y. S. Sane.
13. National Building Code and I.S.I. Specifications
14. 'Materials and Finishes' by Everet.
15. 'A to Z Building Materials in Architecture' by Hornbostle.
16. 'Elements of Structure' by Morgan
17. Engg. Materials – K.S.Rangwala.
18. Engg. Materials – B.K.Agarwal
19. Building Materials – S.K.Duggal.
20. Building Construction –Sushil Kumar.
21. Building Construction –Bindra Arora.



## First Year Bachelor of Architecture

### Semester -1

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10100004	Environmental Science-I (Focus on Built Form )	2	0	10	10	20	60	0	100	2

#### Course Objective

To obtain knowledge required for understanding the influence of climate on architecture.

To familiarize students with the design and settings for buildings for daylight and factors that influence temperature.

The students are exposed to the various design strategies for building in different types of climatic zones.

To be dealt with reference to Architectural Design Studio

#### Course Outcome

List the different elements of climate

Classify the factors of comfort

Infer the impact of climatic forces on built structures

Examine through mathematical formulae the thermal comforts levels of built form

Assess the effects of site, sun and wind in building response

Design of shelters in different climatic conditions.

#### Course Content

##### Module -1

Introduction

Climate and Weather

Elements of Climate

Classification of tropical climates

Climate balanced Architecture

##### Module -2

Bio-Climatic Approach

Human Comfort- definitions and concepts

Thermal Comfort Factors

Bioclimatic Requirements

Relation of climatic elements to comfort

The Bio-Climatic Chart

##### Module – 3

Environment And Building Forms

Impact of External forces on Building

Reading of Psychometric chart and its applicability.

Building configuration and climate response.

##### Module – 4

Site & Building Design

Site Selection, Site Planning

Building Orientation and Placement

Effect of Landscaping

**Module – 5**

Sun & Building Design

Basic Principles of Heat Transfer

Numerical based on heat transfer in buildings

Day lighting & Solar Control

Thermal Insulation

**Module – 6**

Wind & Building Design

Wind effect and Air Flow Pattern

Ventilation Techniques

Air movement around the buildings

Stack Effect and Thermally induced air currents

**Module – 7**

Architectural Application

Shelter for warm-humid climates

Shelter for hot-dry climates

Shelter for composite climate

Shelter for cold –cloudy and cold- sunny climates.

Application of software in climate responsive design

**Studio Exercises**

Suitable exercises on all the Modules mentioned above

Suitable Case studies to be conducted

**Mode of Examination**

Theory Paper of 3 hour duration

**Reference Books**

1.An Introduction To Building Physics by Narashimhan

2.Manual Of Tropical Housing And Building – Part I – Climatic Design by O.H. Koenigsberger

3.Housing Climate & Comfort by M.Evans

4.Man, Climate And Architecture, Applied Science, Banking Essex by B. Givoni

5.Climatic Design by Donald Watson

## First Year Bachelor of Architecture

### Semester -1

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10100005	History of Architecture-I	2	0	10	10	20	60	0	100	2

### Course Objective

To introduce student to architectural development with reference to time, space and people

To introduce students to the historical architecture of various civilisations till 0 C.E. across the world.

Evolution of built forms manifested in spatial and formal abstraction, landscape, structural construction and material order, symbols and meanings with respect to Society, Culture, Climate, Land, Technology

### Course Outcome

To recognize importance of architecture and design through time and across cultures

Identify different styles of historic architecture.

Identify prominent / important historic buildings by their components / style of design

Describe prominent / important historic buildings

Analyse the contributing factors for the design development of different styles.

Compare and Contrast various styles on the basis of the contributing factors responsible for their development

Identifying contemporary buildings in the historic architectural styles

Note: History of Architecture to be taught with reference to various styles of architecture. Appropriate examples should be included to explain it.

### Course Content

#### Module -1

Introduction to Ancient Civilizations their social systems and culture (Till 0 C.E)

Pre-History

Palaeolithic, Mesolithic, Neolithic, Neanderthal rituals, settled farming, hunter gatherer shelters

Settlements locations- river banks, valleys, fertile soils.

Underlying values of relationships between Man, Nature and Society.

#### Module -2

River valley Civilisation - Mesopotamian Civilization

Salient features of Ziggurats and their development

Generic Temple Layout

Palace Complex/Citadel

#### Module -3

River valley Civilisation - Egyptian Civilization

Salient features of important buildings

Temples & temple complexes - Cult Temple and Mortuary Temple

Mastaba – development and typical components

Pyramids ,Standard mortuary complex layout of pyramids

#### **Module – 4**

River valley Civilisation – Indus Valley Civilization, Yellow River Valley Civilisation - China

Salient features of important buildings

Public Buildings

Citadel

#### **Module -5**

Aryan invasion, tribal republics, rise of Magadha, religious philosophies- Upanishads, Jainism, Buddhism. Spread of Buddhism in Mauryan kingdom, Stupa at Sanchi, Rock cut architecture, Buddhist architecture

#### **Module -6**

Greek Architecture

Classical Order – Doric, Ionic, Corinthian

Salient features of important buildings

Temple types on basis of column layout

Discussion of Hellenic Temple (Parthenon, Athens) versus Hellenistic Temple (Athena Polias, Priene)

Public Buildings and Square – Agora, Stoa, Prytaneum, Bouleuterion, Tholos, Gymnasium, Theatre

#### **Module -7**

Roman Architecture

Introduction to Roman civilization, their social systems and cultures

Contribution in new materials and new construction/structural systems, eg, Pozzolana, Cementae, Stone Blocks, Stone Masonry, Arch, Vault, Dome

Salient features of important buildings

Forums of Rome

Aqueduct

Theatres

Baths

Basilicas

#### **Module -8**

Meso American

#### **Studio Exercises**

Suitable exercises on all the Modules mentioned above

#### **Mode of Examination**

Theory Paper with 3 hour duration.

Sessional Work with Assessment.

#### **Reference Books**

History Of Architecture by Sir Bannister Fletcher

The Story Of Architecture by Patrick Nuttgens

Space, Time And Architecture by Siegfried Gideon

## First Year Bachelor of Architecture

### Semester -1

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10100006S	Basic Design and Visual Arts	0	4	30	30	0	0	90	150	2

#### Course Objective

To familiarize the student with visual grammar, methods of visual composition and various mediums

To develop skills in manual presentation techniques,

To act as an interface between Basic design-1, Workshop-1 and Architectural Design Studio-1

#### Course Outcome

Develop principles of 2 dimensional and 3 dimensional composition

Develop manual presentation techniques

Use of colours in design

#### Course Content

##### Module -1

Relationship of Surface, Form, Masses.

Relationship of Point, Line, Motion, Light, Shade.

##### Module -2

Colour Theory

Explore the use of colour in design in context to emotional quotient and context

##### Module -3

Fundamental principles of design, Creativity tools like Synectics

Balance, Harmony, Rhythm, Contrast, Symmetry, Scale, proportions, colours, tones, textures etc

##### Module -4

Sketching

Sketching using Pencil (Black and White) and Colour Pencil

Sketching using Pen, Watercolour and any other suitable medium

Free Hand presentations and rendering techniques

##### Module -5

2D Compositions

3D Compositions

Sculpture

Study of solids & voids to evolve sculptural forms & spaces

##### Module -6

Textures

Study of various textures and their use in architectural design

#### Studio Exercises

Suitable exercises on all the Modules mentioned above (Min 5 on each module on A2 Size)

**Mode of Examination**

Sessional Work with Viva.

**Reference Books**

1. Ching Francis D. K., Form Space and Order.
2. Ching Francis D. K., A Visual Dictionary of Architecture.
3. John R. Mather -Climatology: Fundamentals and Application.
4. Christopher Alexander- Pattern Language
5. Robert Sommer. -Design Awareness.
6. C.M. Deasy -Design for Human Affairs.
7. Pierre Von Meiss -Elements of Architecture from form to place.
8. Yatin Pandya- Elements of Space Making.
9. Paul Lassau – Graphic Thinking for Architects and Planners.
10. Peter Pearce, Structure in Nature – Strategy for Design.
11. Peter Streens, Patterns in Nature.
12. Anthony Antoniadis - Poetics in Architecture: Theory of design
14. Am heim Rudolf, Visual Thinking.
15. John R. Mather -Climatology: Fundamentals and Application.15
16. Maxwell Fry And Jane Drew -Tropical Architecture.
17. Paul Lassau - Graphic thinking for Architects and planners.
18. Jonathan A. Hale -Building Ideas. An introduction to Architectural Theory.
19. William J.J. Synectics: The Development of Creative Capacity (New York Harper and Row Publisher,1961)
20. Elvadine R. Seligmanann : Reaching Students through Synectics: A Creative solution (University of North Colorado) May 10 2007.
21. Jyoce, Bruce and Weil Marsha .Synectics Involving creative thought (Boston Massachusetts: Allan Bacon Publishers, 1996)
22. Tassoul, M (2006) Creative Facilitation: A Delft Approach. VSSD
23. [https://www.free\\_esl.com](https://www.free_esl.com)

## First Year Bachelor of Architecture

### Semester -1

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10100007S	Model Making Workshop (Basic)	0	4	20	20	0	0	60	100	2

### Course Objective

To familiarise students with different types of materials and manufacturing techniques for creating art forms/ models.

To introduce use different kinds of tools and machinery for production of design models.

To act as an interface between Basic design-1, Building Construction and Materials-1 and Architectural Design Studio-1

### Course Outcome

To become aware about the usage of various materials for production of art work.

To apply different mediums and machine tools for production various types of art work.

To create art forms with different mediums.

### Course Content

#### Module -1

Introduction to various materials for model making

Materials like paper, thermocol, clay, ceramic, plastic sheet, sheet metal, wood etc

#### Module -2

Selection of material for model making

Understanding the Applicability of Scale and Proportion through models

#### Module -3

Implementing the geometric shapes

Implementing the solid shapes

#### Module - 4

Introduction to various tools for model making

Application of tools, suitability and safety precautions

### Studio Exercises

Models to be created for Basic design-1, Building Construction and Materials-1, History of Architecture-1 and Architectural Design Studio-1

### Mode of Examination

No Theory paper

Sessional Work with Assessment.

### Reference Books

1. John Taylor, Model Building for Architects and Engineers.

2. Rolf Janke, Architectural Models. Sandeep Singh, Beginning Google Sketch up.

## First Year Bachelor of Architecture

### Semester -1

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10100008S	Elective (Any -1) Personality Development	0	4	20	20	0	0	60	100	2

### Course Objective

To create awareness about effective personality and imbibe in the student the need for professional self-presentation

To imbibe the values of responsible professional

To instil the importance of body language, sharing of thoughts and communication

### Course Outcome

Gain confidence in making public presentations.

To analyse and express individual opinions and views.

To present oneself professionally in the industry.

To express ideas and views through oral and written mediums.

To initiate thinking process.

Identifies the important aspects on verbal communication.

Compares differences in intents within communication.

Interprets the verbal and non-verbal communications.

Able to revise judgments and change behaviour in light of new evidence.

### Course Content

#### Module -1

English- as a medium of expression.

Essay writing, Articles to be written in English on current topics

#### Module -2

Body Language - as a mode of communication

Study of Body language, facial expression, inferences from body language.

#### Module -3

Public Speaking/Debate - as a mode of promotion of ideas

Public speaking / debate to be conducted on current issues. Each student to speak in public so as to gain confidence in speaking as well as to loose stage fright.

#### Module – 4

Group discussion- as a mode of exchange of ideas

Group discussion sessions to be organised in group of 5 students. Any suitable topic to be discussed. Preferably the group should be heterogeneous consisting of students and teachers or students from senior classes.

### Studio Exercises

Assignments related to above mentioned modules. Minimum 10-15 assignments in the form of essays, articles and workshops



**Mode of Examination**

No Theory Paper

Sessional Work with Viva

**Reference Books**

1: Steve Jobs, by Walter Isaacson

2: I can Win, Shiv Khera

3: Alchemist, Paulo Coelho

4: Books on Soft Skills

5: Books on Body Language

6: Autobiographies, Magazines on current issues, English Grammar

## First Year Bachelor of Architecture

### Semester -1

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10100008S	Elective (Any -1) Sketching	0	4	20	20	0	0	60	100	2

#### Course Objective

To develop basic design and expressional skills, visual and perceptual skills, Manual skills of use.

Skills involved in different media and techniques shall be studied for this purpose

To act as an interface between Basic design-1 and Architectural Design Studio-1

#### Course Outcome

To become aware about the usage of various skills for development of design process.

To use different mediums and techniques for production various types of art work.

#### Course Content

##### Module -1

Observation and recording through drawing using. Sketching and Object drawing, drawing from memory.

Observation and recording through drawing using brush, crayons, paint.

Using various paints like Water based, Oil based, etc. Colour theory.

##### Module -2

Drawing simple geometric objects, complex geometries and objects in nature.

Contour drawing, Outdoor sketching exercises, etc.

Line drawing, shade and shading techniques, using pencil, pen, paint, brush, charcoal, crayons etc.

##### Module -3

Abstraction of perceived images, conceptual statements using different media, like pen & paper, brush & paint etc.

##### Module – 4

Perspectives of formal geometric solids and spaces and informal geometries, rendering techniques and use of colour.

#### Studio Exercises

Assignments related to above mentioned modules. Minimum 20-25 assignments in the form sketches

#### Mode of Examination

No Theory Paper

Sessional Work with Viva

#### Reference Books

1: Steve Jobs, by Walter Isaacson

2: I can Win, Shiv Khera

3: Alchemist, Paulo Coelho

4: Books on Soft Skills

5: Books on Body Language

6: Autobiographies, Magazines on current issues, English Grammar

**First Year Bachelor of Architecture  
Semester -1**

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10100008S	Elective (Any -1) Art in Public Spaces	0	4	20	20	0	0	60	100	2

**Course Objective**

To understand reference and relevance of Art in Public Spaces.

To create awareness about Public spaces and their aesthetics.

**Course Outcome**

To analyse the Public Space in relation to Art.

Design Public Space.

To use Art as medium of expression in Public Space.

**Course Content**

**Module -1**

Evolution , Necessity of art in Public Spaces

Use of Public Space

**Module -2**

Types of art in public places

Murals, Sculptures, Paintings, Statues etc

**Module -3**

Usable art in Public Space

Furniture, Water Bodies, Landscape

**Module -4**

Concepts of Public Art and aesthetics

City Squares, City Gardens, Water fronts, Large gathering spaces

**Studio Exercises**

Assignments related to above mentioned modules. Minimum 10-15 assignments in the form of workshops and Case Study.

**Mode of Examination**

No Theory Paper

Sessional Work with Viva

**Reference Books**

1: Art, Space and the City, Malcom Miles

2: The uses of Art in Public Space, Edited by Julia Lassau and Quentin Stevens

3: Public Art by the Book, Edited by Barbara Goldstein

4: Urban Interventions- Personal projects in Public Spaces, Edited by Robert Klanten, S.Khmann and M.Hubner

## First Year Bachelor of Architecture

### Semester -1

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
	Elective (Any -1)									
AR10100008S	Craft Studies	0	4	20	20	0	0	60	100	2

#### Course Objective

To enable students to explore the linkages between environment, craft traditions and society through field studies

#### Course Outcome

To become aware of how craft traditions are influenced by environment and society and vice-versa.

#### Course Content

##### Module -1

Identifying a craft process with respect to materials used, stages of process, techniques used to handle materials through various tools

##### Module -2

The history of a particular craft tradition, its geographical distribution, myths and legends associated with different influences on the craft and patterns of patronage etc. may be discussed.

##### Module -3

To understand the process of creating craft objects from start to finish and documenting it.

Documenting crafts in their own locality / home / state to enable students to understand the design and function of craft traditions in their daily life.

##### Module -4

To equip students with the tools to extend craft traditions to wider applications.

Students can develop their creative innovation skills and can choose any development topic to translate theory into practice.

#### Studio Exercises

Assignments related to above mentioned modules. Minimum 10-15 assignments in the form of workshops and Case Study.

#### Mode of Examination

No Theory Paper

Sessional Work with Viva

#### Reference Books

1: Art, Space and the City, Malcom Miles

2: The uses of Art in Public Space, Edited by Julia Lassau and Quentin Stevens

3: Public Art by the Book, Edited by Barbara Goldstein

4: Urban Interventions- Personal projects in Public Spaces, Edited by Robert Klanten, S.Khmann and M.Hubner

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**Semester -2**

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10020001	Architecture Design-II	0	8	30	30	60	60	120	300	4
AR10020002	Architectural Drawing and Graphics-II (Manual)	0	4	25	25	50	50	100	250	2
AR10020003	Building Construction Technology and Materials-II	2	2	25	25	50	50	100	250	3
AR10020004	Environmental Science-II (Focus on Built Form )	2	0	10	10	20	60	0	100	2
AR10020005	History of Architecture-II	2	0	10	10	20	60	0	100	2
AR10020006	Theory of structures 1	2	0	10	10	20	60	0	100	2
AR10020007S	Model Making Workshop (Basic)	0	4	20	20	0	0	60	100	2
AR10020008S	Elective (Any 1)	0	4	20	20	0	0	60	100	2
	Cultural Influences on Architecture design									
	Architecture Drawing & Graphics (Digital)									
	Photography									
	Art in Landscape & Architecture									
	<b>Total</b>	<b>8</b>	<b>22</b>	<b>150</b>	<b>150</b>	<b>220</b>	<b>340</b>	<b>440</b>	<b>1300</b>	<b>19</b>

## First Year Bachelor of Architecture

### Semester -2

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10020001	Architecture Design-II	0	8	30	30	60	60	120	300	4

#### Course Objective

To introduce the student the fundamentals of architectural design.

To initiate creative thinking and its relationship with activity spaces.

To apply principles of Basic Design and Visual Arts to Architectural Design

To act as an interface between Basic design-1, Workshop-1 and Architectural Design Studio-1

#### Course Outcome

The application of the architectural design process for small scale projects of human habitat.

To transform the human behavioural needs into architectural program requirements.

To compose the architectural spaces in a design project

To communicate architectural drawings with the help of various mediums

#### Course Content

##### Module-1

Design process using various methods like Idea Matrix, Concept Mapping and Pre Design

##### Module-2

Analysis of User / Client living / behavioural profile

Questionnaire to extract client requirements

Case study

##### Module -3

Identify user requirements of space

Deriving the requirements of the space

Transform the behavioural requirements into space form

##### Module -4

Design and Planning of Space

Distribution of the human activity spaces along the context considering the context as visual

Analyse the relationship among the spaces

Verbal presentation on planning of built environment with different mediums

##### Module-5

Detail design

Application of building materials with colour and texture in detail design

##### Studio Exercises

Design of Ground +1 Bungalow / Farm house approx 150 sq.m.

Design of Simple activity spaces such as College Canteen, Small Office, Creche/ Day Care Center etc

#### Mode of Examination

Theory Paper with 4 hour duration.

Sessional Work with Viva.

**Reference Books**

1. Ching, F.D.K.; Architecture Form, Space and Order, Van Nostrand Reinhold Staff, New York, 1996.
2. Rudofsky, Bernard; Architecture without Architects, University of New Mexico Press, New Mexico
3. Rasmussen, Steen Eiler; Experiencing Architecture, The MIT Press, Cambridge, Massachusetts, 1977.
4. Watson, Donald / Crosbie, Michael J.; Time Savers Standards for Architectural Design, Mc Graw Hill, New York, 2005
5. Chiara, Joseph De / Crosbie, Michael J.; Time Savers Standards for Building Type, McGraw Professional Publishing, New York, 1973.
6. Harris, Charles W. / Dines, Nicholas T.; Time Savers Standards for Landscape Architecture, Mc Graw Hill, USA, 1998
7. Chiara, Joseph De / Panero, Julius / Zelink Martin; Time Savers Standards for Interior design and Space Planning, Mc Graw Hill, New York, 2001
8. Gideon, Siegfried; Space, time & Architecture, Harvard University Press

## First Year Bachelor of Architecture

### Semester -2

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10020002	Architectural Drawing and Graphics-II (Manual)	0	4	25	25	50	50	100	250	2

#### Course Objective

Students will be introduced to a variety of tools and techniques for visual expression with emphasis on manual drawing.

To develop essential manual skills such as proficiency in drawing, largely used as primary mode of communication of ideas in architectural design.

#### Course Outcome

Recognize the need to combine the use of manual drawing tools and techniques for drafting and freehand drawing for architectural design communication.

Apply the projected drawing method of exterior and interior perspective.

Construct one and two point perspective drawings from floor plans and elevations.

Produce by Drawing/sketching 3- Dimensional Architectural drawings using and freehand techniques.

Demonstrate an understanding of furniture, people and accessories in one and two point projected perspective drawing.

Construct conceptual and presentation drawings as a design presentation tool for various purposes.

#### Course Content

##### Module -1

3D representation of Solids

Isometric views

Axonometric Views

Oblique Views

##### Module -2

Basics of Perspective Drawing

Anatomy of perspective: Station point, Eye level, Cone of vision, Picture plane, Horizon line, Ground line, Vanishing points

Types of perspectives : One point, Two point, Three point

##### Module -3

Perspectives for Building Exteriors

2 point perspectives of building exterior

3 point perspectives of building exterior

Perspectives of Interior space

Preparation of perspectives using Diagonal Method, Grid Method, approximate method

##### Module - 4

Rendering Techniques for perspectives



Rendering using various mediums such as Pen and Ink, Water colour, Poster Colour, Pencil Colour, Crayons

**Module – 5**

Basics of Sciography Drawing.

Application of Sciography in 2 dimensional drawings with rendering techniques

**Studio Exercises**

Suitable exercises on all the Modules mentioned above

**Mode of Examination**

Theory Paper of 3 hour duration

Sessional Work with Viva

**Reference Books**

1. Ching Francis D.K.: Architectural Graphics

2. Kelsey W. E.: Geometrical & Building Drawing

3. Leslie Martin: Architectural graphics

4. B. James: Essential of Drafting

5. H. Joseph and Morris: Practical plane and solid geometry

6. Gill Robert: Rendering with pen and ink

7. Burden Ernest: Architectural Delineation.

8. Burden Ernest: Architectural Delineation. Gill, Robert W.; Manual of Rendering with Pen and Ink, Thames and Hudson, London, 1997.

9. JaxThemier, B.W., "How to Paint and Draw", Thames and Hudson, 1985.

**First Year Bachelor of Architecture**  
**Semester -2**

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10020003	Building Construction Technology and Materials-II	2	2	25	25	50	50	100	250	3

**Course Objective**

- To introduce the construction methodology of structures
- To understand various types of structures
- To understand the execution process of each building element

**Course Outcome**

- To develop understanding about complex foundations and the constructions techniques involved
- Understand various construction materials.
- Recognise various building envelop systems and their application

**Course Content**

**Module -1**

- Introduction to materials used in civil construction.
- Concrete, Mortar, Structural Steel, Mild Steel, Glass, Aluminium, PVC, u-PVC
- Properties of materials and Quality tests of materials

**Module -2**

- Building Envelope
- Cavity Walls
- Precast partition walls
- Internal partition walls in Gypsum

**Module -3**

- External Wall Section
- Construction details of external brick wall section

**Module -4**

- Construction of Load Bearing Structure- Foundation and Super structure
- Ground Floor Structure in Load Bearing

**Module – 5**

- Composite Masonry- Stone, Brick
- External Cladding Materials and their details of Application
- Stone Masonry

**Studio Exercises**

- Suitable exercises on all the Modules mentioned above

**Mode of Examination**

Theory Paper of 3 hour duration

Sessional Work with Viva

**Reference Books**

1. 'Elements of Structure' by Morgan.
2. 'Structure in Architecture' by Salvadori.
3. 'Building Construction' by Mackay W. B., Vol. 1 – 4.
4. 'Building Construction' by Barry, Vol. 1 – 5.
5. 'Construction Technology' by Chudley, Vol. 1 – 6.
6. 'Building construction Illustrated' by Ching Francis D. K.
7. 'Elementary Building Construction' by Michell.
8. 'Structure and Fabric' by Everet
9. 'Engineering Materials' by Chaudhary.
10. 'Building Construction Materials' by M. V. Naik.
11. 'Civil Engineers' Handbook' by Khanna
12. 'Vastu Rachan' by Y. S. Sane.
13. National Building Code and I.S.I. Specifications
14. 'Materials and Finishes' by Everet.
15. 'A to Z Building Materials in Architecture' by Hornbostle.
16. 'Elements of Structure' by Morgan
17. ENGG. MATERIALS – K.S. RANGWALA.
18. ENGG. MATERIALS – B.K. AGARWAL
19. BUILDING. MATERIALS – S.K. DUGGAL.
20. BUILDING CONSTRUCTION – SUSHIL KUMAR.
21. BUILDING CONSTRUCTION – BINDRA ARORA.

## First Year Bachelor of Architecture

### Semester -2

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10020004	Environmental Science-II (Focus on Built Form )	2	0	10	10	20	60	0	100	2

#### Course Objective

To provide fundamental knowledge about natural and built environment.

To introduce the students to fundamental concepts to understand environmental processes

An attempt to have a detailed understanding of India's natural environment and the threats to them

#### Course Outcome

To make the students aware about the scientific knowledge and current debates on the environment at three nested scales, including their interlink ages – Global, Regional and Local.

To enable the students to understand cause-and-effect relationships between various human, natural and climatic factors that impinges upon ecological systems and their linkages.

To familiarize students with global & national environmental issues, the scale of impacts, important conventions, laws and policies in the field of biodiversity, and environmental protection.

To integrate with higher level studios that have complex briefs, including environmental and ecological concerns.

#### Course Content

##### Module -1

Fundamentals of Environment & Ecology

Environment definition, Environmental Segments, Concepts of Ecosystem: Fundamentals of Ecology and Ecosystem, Components of ecosystem, definition of Ecology, ecosystem processes in a site, Organisms and the Environment, Habitat and Niche, Environmental Factors, Ecological Adaptations, Population, Biotic Community and Succession

Introduction, types, characteristic features, structure and function of different ecosystems: Forest, Grassland, Desert and Aquatic ecosystem

Effects of human activities on environment: Agriculture, Housing, Industry, Mining and Transportation activities

Cite the known threats to India's & the World's Biological Diversity

##### Module -2

India's Bio-geographic regions

List India's Biological Diversity in relation to the physio-geographic regions

Identification of Principal Bio-geographic Zones of India and their description

List of Eco-regions of India –Floristic and Physiographic (eg. IMI0301 etc.)

Distinguish Between Floristic differences in an eco-region say Narmada Valley Dry Deciduous Forest, say Topical Moist Deciduous Forest (Pachmarhi)

Evaluate the importance of biological diversity to all Life – Interconnections between Biological diversity and Human life – sustenance

##### Module – 3

Environmental Degradation and Human Impacts

Analyse Global Climate Change & impacts – with respect to your rural/urban community (Increased risk/

vulnerabilities)

Analyse the impacts of environmental degradation on traditional communities by abstracting from published reports. Write an essay on the theme

#### **Module – 4**

Applications of Ecological Methods and Techniques in Architecture

Develop a Site Plan for Wildlife, Landscape and environmental conservation

Develop a Master Plan for Wildlife, Landscape and environmental conservation

#### **Module – 5**

Techniques and Details

Rain water harvesting (contour bunds, wells, bunds, etc.)

Techniques of waste water management (house level, bio swales etc.)

Ecological planting (planting for wildlife, land improvement etc.)

#### **Module – 6**

Environmental Movements

Environment movements in world and in India (Chipko movement etc)

Environmental activists and their contribution (water conservation movements)

#### **Studio Exercises**

Suitable exercises on all the Modules mentioned above

Suitable Case studies to be conducted

Illustrated Lectures, Texts, Case Studies and examples

#### **Mode of Examination**

Theory Paper of 3 hour duration

Sessional Work with Assessment

#### **Reference Books**

1: Rio Declaration on Environment and Development

2: Environmental Impact Assessment – A guide to best professional practices, Charles H.Eccleston

3: Hand book of Environmental Impact Assessment, Judith Petts

4: Illustrated Lectures, Films, and Introduction of Texts on Environmental Science and Human Ecology

## First Year Bachelor of Architecture

### Semester -2

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10020005	History of Architecture-II	2	0	10	10	20	60	0	100	2

### Course Objective

To provide analytical tool to students to overview the historical evolution of designing and construction technique.

To understand the expanse of styles spread across the time period from 0 C.E.to 1300 C.E. in India, East Asia, West Asia, Europe, Africa & America.

### Course Outcome

Identify different styles of historic architecture.

Identify prominent / important historic buildings by their components / style of design.

Describe prominent / important historic buildings

Analyse the contributing factors for the design development of different styles

Compare and Contrast various styles on the basis of the contributing factors responsible for their development

Design buildings in the historic architectural styles.

### Course Content

#### Module -1

India

Brahminical resurgence

Buddhist monuments

Cave architecture

Architecture of Gupta period

Chalukya Period

Pallava period

Chola and Pandyas development of temple styles

Shankaracharya in South

#### Module -2

Islamic invasions in North

Nagara temple style developed

Slave dynasty founded

Era of saints Dnyaneshwar, Tukaram

Independent Muslim states founded

#### Module -3

West Asia

Trade between India, Asia, Europe

Zoroastrianism in Iran

Buddhism in Afghanistan

Sassanid rule in Persia

Spread of Islam, Caliphates, Arab renaissance

Mongol invasion, Destruction of Baghdad by Genghis Khan, Mongols rule over West Asia, Ottoman rule starts.

#### **Module – 4**

East Asia

Invention of Paper, First writings

Buddhism in China, Srilanka , Japan

Buddhist influence in Chinese art & arch.

Nara civilization in Japan

Angkor Wat in Cambodia

Planned city of Peking capital of Ming dynasty.

#### **Module – 5**

EUROPE – Christianity spreads in Rome

Fall of Roman Empire

Dark Ages begin, Crusades.

Rise of monasteries,

Moorish rule in Spain, The Alhambra

#### **Module – 6**

Romanesque architecture

Early Christian & Romanesque Architecture

Introduction to society and culture of 400 -1150 AD in Europe

Early Christian Architecture

Development of Early Christian Church from Roman Basilica

Salient building – St. Peter's Basilica

Romanesque Architecture

Development of Romanesque architecture from Early Christian architecture

#### **Module -7**

Gothic Architecture

Introduction to society and culture of 1150 – 1350 AD in Europe

Development of Gothic church and its new elements

Pointed Arch window

Different arch types – lancet, equilateral, depressed

Trefoil arch

Cluster column and intersecting vault roof

Clerestory window and triforium

Flying buttress

Glazed window, stone and metal trellis, flamboyant window, rose window

Entrance of church

Salient features of important buildings

Cathedrals of St. Dennis

Cathedrals of Chartres

Cathedrals of Notre Dame (Paris)

Cathedrals of Reims

#### **Module -8**

Africa:

Kingdom of Ghana, Rapid spread of Islam

America : Mayan cities, Peak of Mayan empire, Peak of Chimu empire, Inca rule begins, Beginning of Aztec rule

### **Mode of Examination**

Theory Paper of 3 hour duration

Sessional Work with Assessment

### **Reference Books**

History Of Architecture by Sir Bannister Fletcher

The Story Of Architecture by Patrick Nuttgens

Space, Time And Architecture by Siegfried Gideon

Architecture Of Mughal India by Catherine Asher

Indian Architecture (Buddhist Hindu) Vol. 1 by P. Brown

Indian Architecture (Islamic Period) Vol. II by Percy Brown

A History Of Indian And Eastern Architecture by J. A. Fergusson

The Architecture Of India, Buddhist & Hindu by S. Grover

The Architecture Of India (Islamic) by S. Grover

Islamic Architecture, Form, Function and Meaning by Robert Hillenbrand

The Hindu Temple by George Michell,

Architecture Of the Islamic World by George Michell

Architecture Of World , India by Henry Sterlin

Architecture Of World, India ( Islamic ) by Henry Sterlin

The History Of Architecture In India by Christopher Tadgell

The tradition Of Indian Architecture Continuity, Controversy – Change since 1850 by G.H.R.Tillotson



## First Year Bachelor of Architecture

### Semester -2

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10020006	Theory of structures 1	2	0	10	10	20	60	0	100	2

#### Course Objective

To Introduce Applied Mechanics as an important Subject for Architecture.

The course would enable students to understand various principles of strength of materials especially in the case of beams, columns and trusses

To Understand Different Systems of Forces and their Equilibrium and that a Building is a System of Forces in Equilibrium.

To Introduce and Understand Concepts of Support, Support Reactions, Beams, Loads, Bending and Shear.

#### Course Outcome

Understand basis applied mechanics.

To calculate Shear Force and Bending Moment in structural members.

#### Course Content

##### Module -1

Forces

Applied Mechanics, Statics and Dynamics. Importance of Study.

Forces, Definition, Effects, Different Systems, Principle of Transmissibility and Superimposition of Forces. Resolution and Composition of Forces.

Equilibrium of Concurrent Forces. Parallelogram, Polygonal & Triangular Law of Forces Lami's Theorem. Analytical and Graphical Solution of Forces. Resultant and Equilibrant of a System of Concurrent Forces

Equilibrium of Non Concurrent Forces. Varignon's Principle. Resultant of a system of noncurrent forces as in a beam.

##### Module -2

Centre of Gravity

Definition of Centre of Gravity and Centroid. C.G of Regular Shapes. Computing of C.G of complex Shapes limited to Standard Steel Sections like C, T, L, I and Compound Sections

##### Module -3

Moment of Inertia

Definition of Moment of Inertia and M.I of Standard Shapes. Parallel Axis Theorem, Perpendicular Axis Theorem, Radius of Gyration. Computing M.I of Complex Shapes Limited to C,T,L,I and Compound Sections using these Shapes

Supports and Loads

Supports, Definition, Reactions offered by Simple, Fixed, Hinged and Roller Support.

Statically Indeterminate and Determinate Structures and Degree of Indeterminacy. Beams classified as Simply Supported, Cantilever, Over Hanging, Propped Cantilever, Fixed and Continuous.

Loads Classified as U.D.L, Point Load & Varying Load.

Loads Classified as Dead, Live, Wind, Snow, Seismic. Introduction to Densities of Material and Calculation of Dead loads on a Beam from slab, Brick work above to act as U.D.L and from a abutting beam as a Point Load

Support Reactions. For Simply Supported Beams and Cantilevered Beams only. Loading limited to Point Loads and U.D.L only

#### **Module – 4**

Shear Force and Bending Moment

Shear Force and S.F.Diagram & B.M.D and B.M.Diagram for :: Simple Support with an U.D.L., Simple Support with a Central Point Load, Simple Support with an eccentric point Load, Cantilever with a full U.D.L, Cantilever with a Point Load.

S.F.D and B.M.D of a Simple Supported Beam and Over Hanging Beams with U.D.L and Point Loads. Point of Zero Shear, Point Of Max S.F and B.M max. Point of Contra flexure

Relationship between S.F.D and B.M.D

#### **Studio Exercises**

Suitable exercises on all the Modules mentioned above

#### **Mode of Examination**

Theory Paper with 3 hour duration.

#### **Reference Books**

1. Engineering mechanics by A. K. Tayal

2. Mechanics of structure Vol. I By Junnarkar.

3. Design of steel structures-Vazirani – Rathwani.

4. Design of steel structures- L.S. Negi.

5. R.C.C. Design – Khurmi, Punmia, Sushilkumar.

6. Elements of Structures – Morgan.

7. Structure in Architecture – Salvadon and Heller.

8. Structure Decisions – F. Rosenthal

9. Strength of Materials by Amol Dongre.

10.Engineering Mechanics – RK Bansal and Sanjay Bansal , Laxmi publications, New Delhi.

11.Engineering Mechanics - F.L. Singer, Harper Collins publications.

12. Khurmi, R.S.; Strength of Materials, S. Chand & Company, New Delhi, 2001.

13.Ramamrutham, S.; Strength of Materials, Dhanpat Rai Publication, New Delhi, 1998

## First Year Bachelor of Architecture

### Semester -2

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10020007S	Model Making Workshop (Basic)	0	4	20	20	0	0	60	100	2

#### Course Objective

To familiarise students with different types of materials for civil works

To introduce use different kinds of tools and machinery civil works

To act as an interface between Basic Design and Visual Arts-1, Building Construction and Materials-1 and Architectural Design Studio-1

#### Course Outcome

Use tools and equipment for civil works.

To recognize the actual construction process of civil works.

#### Course Content

##### Module -1

Creating scale models for Basic Design using suitable material

##### Module -2

Creating Building elements using actual materials for construction

Students to construct scale models of construction of Building elements

##### Module -3

Understanding the tools used in construction industry.

Understanding application of the construction methodology

##### Module – 4

Analysis of Art work from history of Architecture using models

#### Studio Exercises

Models to be created for Basic design-2, Building Construction and Materials-2, History of Architecture-2 and Architectural Design Studio-2

Module -3 to be done in group of 5 students under the guidance of subject teacher

#### Mode of Examination

Sessional Work with assessment

#### Reference Books

All books for Basic Design, Building Construction and Materials, History of Architecture and Architectural Design Studio.

## First Year Bachelor of Architecture

### Semester -2

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10020008S	Elective (Any 1) Cultural Influences on Architecture design	0	4	20	20	0	0	60	100	2

#### Course Objective

To appraise about architecture and its relationship to its historical, political, social, economic, technological contexts

To Interpret the aesthetics related to more general systems of ordering within a particular society or group

To recognize architecture to be approached as a cultural practice.

To gain understanding of society, culture and civilization

#### Course Outcome

To recognize importance of architecture and design through time and across cultures.

To comprehend what have been the major issues in the development of architectural design in socio- cultural context.

To appraise about architecture and its relationship to its historical, political, social, economic, technological contexts.

To Interpret the aesthetics related to more general systems of ordering within a particular society or group

#### Course Content

##### Module -1

Culture

Introduction to Sociology and its relationship to architecture

Different theories about culture and social identity with reference to architecture

Socio-economic systems, Political systems

Forms of social organization

##### Module -2

Architectural Traditions

Cosmological models and architectural form

Articulation of people and built environments

##### Module -3

Classical architecture

Vernacular architecture

##### Module – 4

Society and Civilisation

Socio-economic its relationship to architecture

Political systems and its relationship to architecture

Social and cultural aspects of building practices

#### Studio Exercises

Suitable exercises on all the Modules mentioned above

#### Mode of Examination

No Theory Paper

Sessional Work with Viva

**Reference Books**

Conformity and Conflict: Readings in Cultural Anthropology by McCurdy, David W., Dianna Shandy, and James Spradley, eds.

Case examples of research on cultural anthropology

House, Form and Culture by Amos Rapoport

Case studies of various examples from India

Case studies of various examples on social and cultural issues relating to architectural history in India and world.

Architecture in Cultural Change: Essays in Built Form and Culture Research by David G. (ed). Saile (Author)

## First Year Bachelor of Architecture

### Semester -2

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10020008S	Elective (Any 1) Architecture Drawing & Graphics (Digital)	0	4	20	20	0	0	60	100	2

#### Course Objective

To study Architectural drawing and graphics with computer as a tool

To understand use of computers as tool for drawing

To understand architectural drawing in relation to use of software.

To understand presentation techniques using software

Focus on 2D Drawing

#### Course Outcome

Develop understanding of computer aided drafting.

Comprehends computer aided drafting and its parameter as tools and its application in architecture.

Evaluates CAD techniques for quicker methods and presentation skills.

Demonstrate the concepts of CAD drafting methods and techniques in 2D.

#### Course Content

##### Module-1

Basics of Computers

Introduction to use of computers in architecture

Computer operating systems.

##### Module -2

Computer aided drafting

Introduction and use of Computer aided drafting (CAD)

Use of CAD Base software's such as AutoCAD and similar software's

##### Module -3

2D Drawing using CAD software's

Orthographic projections, Development of surfaces, Solids as covered in ADG-1

##### Module-4

Drafting and Printing

Model space , Paper space, Parametric

Blocks, Attributes, Templates

Printing to the scale

#### Studio Exercises

Similar exercises from ADG-1 to be done using CAD software

**Mode of Examination**

Theory paper of 3 hour duration

Sessional work with Viva

**Reference Books**

1.Fundamentals Of Three-Dimensional Computer Graphics by Watt

2.Computer Aided Design guide For Architecture, Engineering And Construction by Aouad

3.Latest versions of AutoCAD

4. Architectural drawing: a visual compendium of types and methods; Rendow Yee; John Wiley and Sons, 2007

5. Architectural Graphics; Francis D. Ching; John Wiley and Sons, 2009

## First Year Bachelor of Architecture

### Semester -2

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
	Elective (Any 1)									
AR10020008S	Photography	0	4	20	20	0	0	60	100	2

### Course Objective

To understand photography as a medium of expression

To understand photography in relation to architecture

### Course Outcome

Use of Photography with architectural projects.

Using photography as a tool of expression.

Create photographic effects.

Use of Photography with architectural projects.

Use various modes of photography such as Still photography and Motion photography.

Documentation in digital format.

### Course Content

#### Module -1

History of photography

#### Module -2

Different types of Cameras and lenses. Optical materials, Plastic/glass, lens coating, Types of lenses Normal / Standard, Wide angle, Fish Eye lenses, Zoom, Micro Lenses, Macro Lenses, Faults in lenses, aberrations, resolution, Flare and Ghost image.

#### Module -3

Art of photography and great photographers of the world

#### Module – 4

Effects

Effect of lighting, Effect of filters in Photographs

Lighting for form and shape, Lighting for texture, Lighting for Still Life, Lighting for a product, High Key lighting, Low Key Lighting, Night Photography.

#### Module – 5

Digital photography-Still and Motion

#### Module – 6

Film based photography

#### Module – 7

Editing and Mixing of visuals

#### Module – 8

Documenting architectural work through photography



**Studio Exercises**

Assignments related to above mentioned modules. Minimum 10-15 assignments.

**Mode of Examination**

No Theory Paper

Sessional Work with Viva

**Reference Books**

1: The 35mm Handbook-Michael Freeman

2: Focal encyclopaedia of Photography, Focal press

3: Basic Photography, M.J.Langford, Focal press

4: Advanced Photography (Vol-1 and Vol -2), M.J.Langford, Focal press

5: Creative Colour Photography Techniques- Marshall Cavendish

6: Digital Photography in Available Light- Essential Skills, Mark Galer, Focal Press

7: The Art of Digital Photography, John Hedgecoe, DK Ltd, UK

8: Mastering Digital SLR Photography, David D.Bush, Thomson

9: Understanding Exposure, Bryan Peterson, Amphoto Books

10: Learning to see creatively, Bryan Peterson, Amphoto Books

11: The Art of Photography : An approach to Personal Expression, Rocky Nook

12: The Photographer's Eye, Michael Freeman, Focal Press

13: Architectural Photography, Adrian Schulz, Rocky Nook

14: The Beginners Photography Guide, DK

**First Year Bachelor of Architecture****Semester -2**

Subject Code	Subject	Teaching Scheme		Evaluation Scheme						Credits
		L	S	CA1	CA2	MSE	ESE-Paper	ESE-SW/STW	Total	
AR10020008S	Elective (Any 1) Art in Landscape & Architecture	0	4	20	20	0	0	60	100	2

**Course Objective**

To understand reference and relevance of Art in Architecture and Landscape

To create awareness about Art form that can be used in Architecture and Landscape

**Course Outcome**

Relate Art, Architecture and Landscape.

Use various art forms in architecture and landscape.

**Course Content****Module -1**

Role of Art in Architecture and Landscape

**Module -2**

Symbiotic relationship of art ,architecture and Landscape

Identify, evaluate the relationship

**Module -3**

Application of different art forms in architecture and Landscape

Use of Murals, Sculptures, Paintings, Statues etc.

**Module – 4**

Works of different artists and architects that reflect the inter relationship.

Study of various landmark structures with reference to us of Art work

**Studio Exercises**

Assignments related to above mentioned modules. Minimum 10-15 assignments in the form of workshops and Case Study.

**Mode of Examination**

No Theory Paper

Sessional Work with Viva

**Reference Books**

Literature available on above modules