

18IDT101	THEORY OF INTERIORS							SEMESTER-I		
Marks	Internal	40	External			60	Total	100	Exam Hours	3
Instruction Hours/Week	L	2	T	0	P/S	0	Credits			2

#### COURSE OBJECTIVE:

- Understanding various aspect such as form, scale, light, dimension, height, transitional elements etc affecting interior space.
- Understanding and applying design vocabulary such as Point ,Line, shape, color, texture, area, mass, volume etc.
- Understanding and applying design principles such as ratio, proportion, scale, balance, harmony, unity, variety, rhythm, emphasis.
- Understanding the process involved in design including analysis, synthesis and evaluation.
- Evaluating Design typology
- Understanding the usage of the elements of design in the projects in future.

#### COURSE OUTCOME:

1. A In depth understanding of the definition of Interior design.
2. Elements of Design and forms in design to be analyzed and used.
3. An exposure to the principles of Interiors and the application of the same in built environments
4. An understanding the meaning of character and style of the interiors in buildings with examples.
5. An exposure to the students on ideologies and philosophies of Interiors and its contemporary.
6. The students will be able to apply the theory into the design problems and be design ready.

#### UNIT – I INTERIOR SPACE

Space– definition; Interior space – spatial qualities, :form,, scale, outlook; structuring space with interior designelements;spatialform;spatialdimension–square,rectangle,curve linear spaces; height of space; spatial transitions – openings within wall planes, doorways, windows, stairways.

#### UNIT – II DESIGN VOCABULARY

Form–point, line, volume, shape, texture and color–in relation to light, pattern etc. and application of the same in designing interiors.

#### UNIT – III DESIGN PRINCIPLES

Ratio; proportions–goldensection;relationships;scale;Balance–symmetrical,radial,occult;harmony; Unity; variety; rhythm; emphasis.

#### UNIT- IV ANTHROPOMETRICS

Definition, theory of standard dimension based on human figures for activities, functions, circulation, furniture design, spatial requirements etc.

Study of Ergonomics

Design of Furniture for Living, Dining, Kitchen, Office etc.

#### UNIT – V DESIGN CONTROL

Design process – Analysis, synthesis, design evaluation; Design criteria–function and purpose, utility and economy, form and style; human factors-human dimensions, distance zones, activity relationships;

Fitting the space – plan arrangements, function, aesthetics

## **SUGGESTED READINGS**

1. Francis. D. K. Ching, Interior design Illustrated, Van Nostrand Reinhold(1996)
2. John. F. Pile, Interior Design, Harry Abrams Inc.(1988)
3. Sam. F. Miller, Design process – a primer for Architectural and Interior Design, Van Nostrand Reinhold.(1995)
4. Gary Gordon, Interior lighting for designers, JohnWiley & Sons Inc.(2003)
5. Harold Linton, Colour in Architecture, Mc Graw Hill(1999)
6. Jonathan Poore, Interior Color By Design, Rock Port Publishers.(1994)
7. Sherrill Winton, Interior Design and Decoration, Prentice Hall.(1937)
8. Johanness Itten, The Art of Color, John Wiley and Son(1993)

<b>18IDT102</b>	<b>HISTORY OF INTERIORS</b>							<b>SEMESTER-I</b>		
<b>Marks</b>	<b>Internal</b>	<b>40</b>	<b>External</b>			<b>60</b>	<b>Total</b>	<b>100</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>3</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>0</b>	<b>Credits</b>			<b>2</b>

**COURSE OBJECTIVE:**

- To help the student understand the designs from Prehistoric Period to the Middle Ages.
- To know more on the Modern Movements in Interior design from the beginnings of 20<sup>th</sup> century.
- To allow students to learn from the rich heritage the elements of aesthetic design.
- To understand the construction techniques of the ancient times.
- To understand the skilled labor and the presence of the same in the olden days.
- To understand the same scene in the contemporary era and its challenges to execute the same finesse.

**COURSE OUTCOME:**

1. An understanding about the spatial and stylistic qualities associated with architecture.
2. An Understanding of architecture as an outcome of various social, political and economic upheavals, and as a response to the cultural and context.
3. The individual will be exposed to the present to the ancient day's comparison in techniques..
4. To use the techniques of the ancient times and to overcome the challenges faced by the same.
5. To respect the wide heritage that can be offered with respect to the various Architecture eras.
6. An understanding of the influences of lifestyle and culture of the respective times

**UNIT – I EARLY CLASSICAL PERIOD**

Prehistoric Cave paintings–Primitive Designs – Interiors during Egyptian, Greek, Roman, Gothic, Early Christian and Renaissance Periods.

**UNIT – II MIDDLE AGES**

Interiors in Romanesque, Gothic, and renaissance periods

**UNIT – III COLONIAL TO THE BEGINNING OF THE 20<sup>th</sup> CENTURY**

Colonial, Victorian designs, Arts & Crafts movement, Art Nouveau, Eclectism, Frank Lloyd Wright.

**UNIT – IV BAUHAUS TO POST WARMODERNISM**

Walter Gropius/ Bauhaus, De Stijl, Mies Van DerRohe, Le Corbusier, Art Deco, Postwar Modernism.

**UNIT – V PROJECTS**

Projects based on Historical Styles in Interiors & Assignments.

**SUGGESTED READINGS**

1. Interior Design Course, Mary Gilliat Coyran, Octopus Ltd., London(1995)
2. Interior Design & Decoration, Sherril Whiton, Prentice Hall (1937)
3. Interior Design, Francis D.K. Ching, John Wiley & Sons, New York (2012)
4. History of Architecture, Sir Banister Fletcher, CBS Publishers & distributors, New Delhi (1999)
5. Time Saver Standards for Interior Design, Joseph DeChiara, McGrawHill, New York (1991)

<b>18IDP111</b>	<b>SPACE PLANNING AND ERGONOMICS</b>							<b>SEMESTER-I</b>		
<b>Marks</b>	<b>Internal</b>	<b>60</b>	<b>External</b>			<b>90</b>	<b>Total</b>	<b>150</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>2</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>2</b>	<b>Credits</b>			<b>3</b>

**COURSE OBJECTIVE:**

- To develop an understanding of various degrees of enclosure, various types of relationship between spaces.
- Understanding of the various effects that could be created by manipulating the enclosing elements such as walls, roof etc.
- To understand design with relation to a human being with respect to size, shape, and color.
- To understand a human bodies and its various movements and to accommodate the same into design standards.
- To understand spatial parameters with respect to the function and implications inflicted regarding the same.
- To introduce a self to design methodology..

**COURSE OUTCOME:**

1. The students understand the relationship of human being with its environment and implement the study into design.
2. The students are taught to be able to design spaces based on patterns of circulation, proximity and levels of privacy zones.
3. The students understand the different postures and positions with dimensions of the human body and will be able to recognize activities and relate the need of human measurements in the design principles.
4. To bring a relation with design principles and the human being using the design principle.
5. To be able to create a project in direct relation to this subject and hence be able to apply theoretical knowledge into practical construction
6. To introduce the student to visual analyses and hence be practically well equipped.

**UNIT –I ANTHROPOMETRICS**

Basic anthropometrics – average measurements of human body in different postures – its proportion and graphic representation, application in the design of simple household and furniture.

**UNIT-II SPATIAL PARAMETERS**

Role of mannequins in defining spatial parameter of design. Basic human functions and their implications for spatial planning. Minimum and optimum areas for various functions. Preparing user profile, bubble and circulation diagrams.

**UNIT –III DESIGN METHDODOLOGY**

Introduction to design methodology. Detailed study of spaces such as living, dining, bedrooms, kitchen, toilet etc. including the furniture layout, circulation, clearances, lighting and ventilation, etc. Case study of existing house and analysis of the spaces.

**UNIT – IV VISUAL ANALYSIS**

Visual analysis of designed spaces noted for comfort and spatial quality; analysis of solid and void relations, positive and negative spaces.

## **UNIT-V PROJECT**

Integration of spaces and function in the design of bus shelter, milk booth, watchman's cabin, traffic police kiosk, flower stall, ATM center, etc.

Note: In the end exam, which is a viva-voce, the students have to present the entire semester's work for assessment.

## **SUGGESTED READINGS**

1. Karlen Mark, Space planning Basics, Van Nostrand Reinhold, New York, 1992.
2. Joseph D Chiara, Julius Panero, & Martin Zelnick, Time Saver standards for Interior Design & space planning, 2nd edition, Mc-Graw Hill professional, 2001.
3. Francis.D. Ching & Corky Bingelli, Interior Design Illustrated, 2nd edition, Wiley publishers, 2004.
4. Julius Panero & Martin Zelnick, Human Dimension & Interior Space: A source book of Design Reference standards, Watson – Guptill, 1979.
5. Karlen Mark, Kate Ruggeri & Peter Hahn, Space Planning Basics, Wiley publishers, 2003.

<b>18IDP112</b>	<b>ART AND CRAFT</b>							<b>SEMESTER-I</b>		
<b>Marks</b>	<b>Internal</b>	<b>40</b>	<b>External</b>			<b>60</b>	<b>Total</b>	<b>100</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>5</b>	<b>Credits</b>			<b>3</b>

### **COURSE OBJECTIVE:**

- To encourage a critical orientation to design thinking and action.
- To understand the word critical meaning that everything must be open to enquiry and alternative view point.
- By design thinking and action it means that the process if observation and study of natural and manmade objects and systems,
- Ideation, free exploration , and development of personal skills and attitudes.
- To bring a creative interactive movement of students that will mould the respective skill.
- Skill based learning with adept technology support for the same.

### **COURSE OUTCOME:**

1. The students are exposed to various mediums, techniques and tools.
2. The students gain mastery in sketching, visualizing and expression through manual drawing.
3. Sensitized to culture, craft and context.
4. Skill Development in Handling Materials and in Making Products
5. To be updated to the art world and to hone a skill that precedes the student in an overall development.
6. To imbibe qualities of confidence and orator ship.

### **OUTLINE**

Observation & study 1 – selection of two indoor objects /systems and observation of their natural occurrence, relationships with context form, structure color textures and mainly functions.

Observation & Study 1 – Sketching and visual representations in various media

Observation & Study 1 – 3 dimensional modeling in appropriate medium (clay, Paper, wire, Plastic, wax, etc.)

Observation & study 2 – selection of two outdoor objects /systems and observation of their natural occurrence, relationships with context form, structure color textures and mainly functions.

Observation & Study 2 – Sketching and visual representations in various media

Observation & Study 2 – 3 dimensional modeling in appropriate medium (clay, Paper, wire, Plastic, wax, etc.)

Material study 1 – selection of two materials used in everyday life (textiles earthenware terracotta, metals, stone, plastic, glass etc. and study its properties.

Material study 2 – sketching and visual representation of materials in various media like clay paper plaster wood wire wax photography.

Material study 3 – hands on making of object / joint/ structure with one of the materials studied.

## **SUGGESTED READINGS**

1. Webb, Frank, “The Artist guide to Composition”, David & Charles, U.K., 1994.
2. Ching Francis, “Drawing a Creative Process”, Van Nostrand Reinhold, New York, 1990.
3. Alan Swann, “Graphic Design School”, Harper Collins, 1991.
4. Envisioning Architecture – an analysis of drawing , Iain Fraser & Rod Henmi, 1991
5. Moivahuntly, “The artist drawing book”, David & Charles, U.K., 1994.

<b>18IDS121</b>	<b>BASIC INTERIOR DESIGN -I</b>						<b>SEMESTER-I</b>			
<b>Marks</b>	<b>Internal</b>	<b>160</b>	<b>External</b>			<b>240</b>	<b>Total</b>	<b>400</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>0</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>12</b>	<b>Credits</b>			<b>8</b>

### **COURSE OBJECTIVE:**

- To develop an understanding of various degrees of enclosures and various types of relationship between spaces.
- Understanding of the various effects that could be created by manipulating the enclosing elements such as walls, roof etc.
- To understand the design proximity and relation of spaces.
- To understand the translation of the drawing from board to reality and unification of the spaces.
- To understand the basic concepts for the size of the project.
- Develop an eye for design thinking that will encourage students to explore their creative capacities.

### **COURSE OUTCOME:**

1. An understanding of the qualities of different elements as well as their composite fusions.
2. An ability to engage and combine the elements of design in spontaneous as well as intentional ways in order to create desired qualities and effects.
3. Development of required skills – observation / analysis / abstractions / interpretation / representations / expressions through models and drawings.
4. To analyze the pre data of the concepts and to introduce design solutions using a creative approach.
5. To be able to describe an understanding that is both in representation and verbally present the same.
6. To update and to introduce various other methodologies to enhance the skill set.

### **UNIT I TO V**

Design Thinking: What is Design? Changing Role of the Designer; Route map of the Design Process; Components of Design Problems; Measurement, Criteria & Judgment in Design; Types and Styles of Thinking – Creative thinking, Guiding Principles.

#### **INTRODUCTION TO ELEMENTS OF DESIGN**

Properties, qualities, and characteristics of (i) line, (ii) direction, (iii) shape, (iv) size, (v) texture, (vi) space (vii) time and motion (viii) value and (vii) color. Exercises involving the same

Exploration in mixed media & collage to convey a specific theme and meaning.

Analytical Studies to be undertaken in two and three dimensions using various materials and tools.

The principles of design relationships/ Composition – Unity & Harmony, Balance, Scale & Proportion, Contrast and Emphasis, and Rhythm. Exercises involving the same.

Lecture introduction into the discipline of interior design and the transformation from basic design to interior design - Placing Interiors (Building, Site, Orientation, Climate, City and Landscape); History & Precedent; Materials & Construction; Representation and Realization.



## **SUGGESTED READINGS**

1. The Fundamentals of Architecture (Fundamentals (Ava)) (Paperback) by Lorraine Farrelly (Author)2007
2. Francis D.K.Ching - Architecture - Form Space and Order Van Nostrand Reinhold Co., 1998
3. Design Methods (Architecture) (Paperback), by John Chris Jones (Author).1981
4. How Designers Think, Fourth Edition: The Design Process Demystified (Paperback) by Bryan Lawson.2005
5. Basics Design Ideas (Paperback) by Bert Bielefeld (Author), Sebastian El khouli (Author).2007
6. Graphic Thinking for Architects, Paul Laseau 1980
7. Foundations of Art and Design (Paperback) by Alan Pipes (Author) 2017
8. John W.Mills - The Technique of Sculpture, B.T.Batsford Limited, New York - Reinhold Publishing Corporation, London, 1966.
9. C.Lawrence Bunchy - Acrylic for Sculpture and Design, 450, West 33rd Street, New York, N.Y.10001, 1972.
10. The Elements of Graphic Design: Space, Unity, Page Architecture, and Type (Paperback) by Alexander W. White (Author)
11. Geometry of Design: Studies in Proportion and Composition, Kimberly Elam.David Gibson 2012

<b>18IDS122</b>	<b>INTERIOR MATERIALS AND CONSTRUCTION - I</b>						<b>SEMESTER-I</b>			
<b>Marks</b>	<b>Internal</b>	<b>80</b>	<b>External</b>			<b>120</b>	<b>Total</b>	<b>200</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>2</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>5</b>	<b>Credits</b>			<b>4</b>

**COURSE OBJECTIVE:**

- Understanding the basic components of the buildings that envelope a small buildings
- Understanding the different types in each element and different treatments for the same.
- Understanding function of each component of a building like foundation, walls, beams, column, and roofs.
- Understanding simple roof & floor finishes.
- To understand the primary basics of the loading in a structure and the distribution of the load
- To understand the composition and properties of the materials.

**COURSE OUTCOME:**

1. Students learn Interior construction details using naturally occurring building materials.
2. Student are taught to judge the structure before making any structural changes required in renovation.
3. Working format with for materials such as stone, bamboo, mud and lime through drawing as well as doing a literature or live case study.
4. Students are to submit drawing plates comprising of technical plan, elevation and section along with sketches and details showing method of construction.
5. Students will be honing the skills of technical drawings and their representations.
6. Students will be able to use this material knowledge during construction and can find best materials suited for apt activities.

**UNIT – I INTRODUCTION TO MATERIALS**

Wood-Soft and hardwood, Plywood, laminated wood and particle boards–properties, manufacture & Uses. Synthetic Materials–Different types of Glass, their properties, manufacturing processes and uses. Plastics – injection molding & other manufacturing methods, etc. Fabrics – textile, Jute, leather etc. different types and their uses

**UNIT – II BUILDING COMPONENTS**

Drawings of the components of a building indicating

- Foundation –brick footing, stone footing & rcccolumn footing
- Concrete flooring, plinth beam & floor finish
- Superstructure- brickwork with sill, lintel, windows& sunshade
- Flat rcc roof with weathering course, parapet & coping.

**UNIT – III TILED ROOFS**

Drawings indicating various types of sloped & hipped roof Types of sloping roof –lean to & couple roof with Mangalore tiles, country tiles & pan tiles.

**UNIT – IV STRUCTURALSYSTEMS**

Structures–Components offload earring wall & rcc slab roof system-rcc beams, columns and framed structure

**UNIT–V BASICSERVICES**

Components of a toilet & bathroom – sanitary ware -w.c, wash basin, bidet, bathtub, Jacuzzi etcSanitary fittings – taps, mixers, shower units

## **SUGGESTED READINGS**

1. S. C. Renewal - Engineering materials - Charotar Publishing, Anand 2003
2. Francis D. K. Ching - Building Construction Illustrated, VNR, 1975,
3. Parker, Harry, 1957, Materials and Methods of Architectural Construction, John Wiley & Sons, London 1957
4. C.Rangwala, Engineering Materials, Charotar Publishing House, Anand, 1997.
5. Understanding Buildings: A Multidisciplinary Approach (Paperback) by Esmond Reid
6. R.J.S.Spencke and D.J.Cook, Building Materials in Developing Countries, John Wiley and Sons, 1983.
7. HUDCO - All you want to know about soil stabilized mud blocks, HUDCO Pub., New Delhi, 1989.
8. UNO - Use of bamboo and reeds in construction - UNO Publications. 1975

18IDS123	INTERIOR GRAPHICS- I							SEMESTER-I		
Marks	Internal	60	External			90	Total	150	Exam Hours	3
Instruction Hours/Week	L	1	T	0	P/S	5	Credits			3

**COURSE OBJECTIVE:**

- To help students to learn & understand the techniques of various methods of drawing
- To make them understand the use of colors & their effects in drawings.
- To understand various geometrical shapes.
- To be able to scale geometry and understand the sizes.
- To understand sciography and its representation.
- To be able to improve different lettering.

**COURSE OUTCOME:**

1. Ability to construct the 3d views and perspective drawings of the Interiors
2. Understanding of advanced documentation and measured drawing techniques.
3. Ability to express design in all dimensions
4. Ability to improve drawing skills.
5. To be able to understand the various measurements of the drawings.
6. To be able to express and exhibit drawings to the best understanding for professional practice

**UNIT-I INTRODUCTION TO FREE HAND DRAWING**

Basic exercises, Stilllife, Basic forms, effect to finest or present textures- Understanding of different types of perspective views using vanishing points, shading exercises etc.

**UNIT – II SKETCHING**

Outdoor sketching including Lawns, bushes, Water Bodies, Plants & trees in different media. Indoor sketching – furniture’s, lights, corridor, lobby, class room etc.

**UNIT – III MEASUREDDRAWING**

Lettering- types, Scale, Measured drawing of furniture, Wall paneling, flooring pattern, ceiling pattern, Doors and windows.

**UNIT – IV GEOMETRICAL DRAWING**

Orthographic projections-Projection of lines, planesandsolids, section of primary solids such as pyramids, cones, cylinder, prism, sphere, cuboids, etc.

**UNIT – V ISOMETRIC DRAWING**

Isometric projection fall platonic solids such as cube, cuboid,hexagonal prism,pyramids,coneand sphere etc – isometric projection of singly and doubly curvesurfaces.

**SUGGESTED READINGS**

1. Paul Laseau, Freehand Sketching: An Introduction. 2003
2. Robert S. Oliver,, The Complete Sketch, Van Nostrand Reinhold, New York, 1989.
3. Tokyo Musashino Academy of Art - Introduction to Pencil Drawing, Graphic - Shaw Publishing Co. Ltd., Japan, 1991.
4. Freehand Drawing for Architects and Interior Designers (Paperback) by Magali Delgado Yanes (Author), Ernest Redondo Dominguez (Author) 2005
5. Alwyn Cranshaw, Learn to paint with Water colours, Acrylic colours, Boats and Harbours, Sketch, Still life, landscapes, William Collins Sons and Co. Ltd., London, 1981.
6. IH. Morris, Geometrical Drawing for Art Students - Orient Longman, Madras, 1982.
7. Francis D. K. Ching, Architectural Graphics, Van Nostrand Rein Hold Company, New York, 1964.
8. C. Leslie Martin, Architectural Graphics, The Macmillan Company, New York, 1964.

9. Architectural Drawing: A Visual Compendium of Types and Methods (3rd edition) by Rendow Yee 2013
10. Drawing – A creative Process, Francis D.K. Ching, John Wiley Sons, New York
11. How to paint & draw, Bodo W. Jaxtheimer, Thames & Hudson, London
12. Geometrical drawing for art students, 2nd revised edition- I.H. Morris, Orient Longman, Calcutta, 1995.
13. Architectural drafting and design, 4<sup>th</sup> edition – Ernest R. Weidhaas, Allyn and Bacon, Boston, 1981.
14. Building drawing, 3<sup>rd</sup> edition – M G Shah, C M Kale, Tata Mcgraw– Hill publishing, New Delhi.

<b>18IDT201</b>	<b>PSYCHOLOGY OF INTERIORS</b>							<b>SEMESTER-II</b>		
<b>Marks</b>	<b>Internal</b>	<b>40</b>	<b>External</b>			<b>60</b>	<b>Total</b>	<b>100</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>2</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>0</b>	<b>Credits</b>			<b>2</b>

**COURSE OBJECTIVE:**

- To create environments and spaces that encourage balance, achievement, positive interaction, and personal wealth for yourself and your clients.
- To exercise creativity and expertise and sculpt beautiful, and profoundly meaningful places and spaces.
- To create spaces that are psychologically pleasing and also understand the need to understand the requirements of the clients.
- To understand the hidden meanings behind the clients thoughts
- To understand psychology in various platforms like scale, color, volume and other such parameters.
- To understand the human behavior in various psychological settings.

**COURSE OUTCOME:**

1. Ability to construct, relate and understand the basic principles of psychological analysis on human mind.
2. To research and utilize techniques that is related to the social, economic and community behavior of human behind and to adapt the findings in utility and aesthetic designs.
3. To introduce the understanding of the research for the design process for the individual taste of every client in the professional practice.
4. Ability to understand spaces in relation to the color, scale , volume and other parametric of the design theory.
5. To develop the ability to understand the psych of the client in relation to his expectations and analyze possibilities of design application.
6. To have a successful design practice.

**UNIT – I GESTALT PRINCIPLES**

Perception of space through understanding associative aspects relating to space. Understanding cognitive theories and Gestalt principles of psychology related in the field of space making to develop an understanding of place making.

**UNIT – II SPATIAL ELEMENTS**

Relationship of spatial elements like floor, column, wall, window, door, stair, roof, light, color, textures to the psychology and perception of space.

**UNIT – III MOVEMENT**

Kinesthetic – Understanding perception while in movement and space organization around such a phenomena.

**UNIT – IV SOCIAL PATTERNS**

Analysis of human mind and his/her image of the world - social behavior patterns, traditional thinking and behavior and reflection of social world into physical environment.

**UNIT – V HUMAN BEHAVIOUR**

Human being and his behavior in various public and private areas – change of patterns in various cultures. Human behavior in a group. Activities and its relationship with grouping of people  
Assignment: Space planning for public areas- restaurant, café, theatre lounge, waiting rooms, hotel foyer etc based on analysis of human behavior and perception of space.

### **SUGGESTED READINGS**

1. Bryan Lawson, Language of Space, Architectural Press, 2001.
2. Yi- Fu Tuan, Steven Hoelscher, Space and Place: The perspective of experience, University of Minnesota Press, 2001.
3. Setha. M. Low, Denise Lawrence – Zunigias, Anthropology of Space and place: Locating Culture, Wiley – Blackwell publishers, 2003.
4. Irwin Altman & Erwin. H. Zube, Public spaces and places, (Human Behavior and environment), Springer link, 1989.
5. Roger Downs, David Stea, Kenneth. E. Boulding, Image and environment, Transaction Publishers, 2005.

18IDT202	HISTORY OF INTERIORS – II							SEMESTER-II		
Marks	Internal	40	External			60	Total	100	Exam Hours	3
Instruction Hours/Week	L	3	T	0	P/S	0	Credits		2	

#### COURSE OBJECTIVE:

- To help the student understand the Modern movement in design in the later part of the 20<sup>th</sup> century.
- To make the students understand the traditional styles of decoration done in various states of India.
- To understand the global history and its applications in design.
- To appreciate technology of the ancient times and to relate adaptations in the current situation. To allow students to learn from the rich heritage the elements of aesthetic design.
- To understand the construction techniques of the ancient times.
- To understand the skilled labor and the presence of the same in the olden days.
- To understand the same scene in the contemporary era and its challenges to execute the same finesse.

#### COURSE OUTCOME:

1. An understanding about the spatial and stylistic qualities associated with architecture.
2. An Understanding of architecture as an outcome of various social, political and economic upheavals, and as a response to the cultural and context.
3. The individual will be exposed to the present to the ancient day's comparison in techniques..
4. To use the techniques of the ancient times and to overcome the challenges faced by the same.
5. To respect the wide heritage that can be offered with respect to the various Architecture eras.
6. An understanding of the influences of lifestyle and culture of the respective times

#### UNIT – I RECENT DIRECTIONS

Design movements such as Late Modernism, High Technology, Post Modernism, and De-Constructivism and Minimalism

#### UNIT – II NON EUROPEAN TRADITIONS

Interiors in China, Japan & the Islamic World–Influences of Pre-Columbian American art & culture, African influences in interiors

#### UNIT – III SCANDINAVIAN TRADITIONS

Interior Design in Sweden, Finland, Norway. Contributions of Architects such as Alvar Alto, etc.

#### UNIT – IV INDIAN TRADITIONAL DESIGNS

Traditional Styles of design & decorations of homes & accessories across the states in India including Rajasthan, Gujarat, Andhra, Tamil Nadu, Madhya Pradesh etc.

#### UNIT – V PROJECTS

Assignments on recent directions & Non European traditions, Traditional designs of India.

#### SUGGESTED READINGS

1. Interior Design Course, Mary Gilliat Coyran, Octopus Ltd., London 2005
2. Interior Design, Francis D.K. Ching, John Wiley & Sons, New York 1976
3. Time Saver Standards for Interior Design, Joseph De Chiara, McGraw-Hill, New York 2001.
4. Publication on Traditional Arts & Crafts of India, Ministry of Handicrafts Development, Government of India 2001
5. Interior Design, John F. Pile, Harry Abrams Inc



<b>18IDP211</b>	<b>COMPUTER APPLICATIONS - I</b>						<b>SEMESTER-II</b>			
<b>Marks</b>	<b>Internal</b>	<b>60</b>	<b>External</b>			<b>90</b>	<b>Total</b>	<b>150</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>4</b>	<b>Credits</b>			<b>3</b>

**COURSE OBJECTIVE:**

- To make them digitally strong in the design related software.
- To make them understand and realize beautiful presentations.
- Understand #D nuances related to this subject.
- To represent ideas using technology and to be update in the use of softwares.
- To introduce to basic features of Artificial intelligence
- To Use software that are related to to BIM

**COURSE OUTCOME:**

1. Ability to express using digital tools in the realm of visual composition, drafting.
2. Ability to express using digital tools 3D visualization and rendering
3. To be able to represent ideas digitally for client understanding.
4. To understand the design in 3d to ensure the elimination of design flaws when translated from 2 d
5. To understand BIM and its overall structure.
6. To induce digital drawing reading and performing capacity.

**UNIT I A UTOCAD TOOLS**

Command programming – modifying commands, selection sets, Zoom, accurate inputs.

Introduction to Layers, Texts and Scale. Suggested Software - AutoCAD

**UNIT II MODIFICATIONS**

Command programming - transparent overlays, hatching utilities, assigned color and line types.

**UNIT III INSERTS**

Use of multiline, style, block, symbols and libraries.

**UNIT IV PROJECT**

Advance exercise in 2D drafting of various complex building drawings, incorporating Line types and Line types Styles.

**UNIT V CUSTOMISZATION**

XREFS, Tables, Modifying and creating Dimensions and customizing AutoCAD; Understanding concepts of Vport, concept of object linking, and editing session.

Suggested Software – AutoCAD

**SUGGESTED READINGS**

1. MS Office 2010 Product Guide by Microsoft
2. First Look Microsoft Office 2010, Katherine Murray, Microsoft
3. Sketch up 7 User Self help Tutorials and Video Tutorials
4. Cherly R. Shrock Beginning AUTOCAD. New Age International Publishers. New Delhi. 2006.
5. AutoCAD architectural users guide - Autodesk Inc., 1998.
6. AutoCAD 2011 User Manual, Autodesk 2011.

<b>18IDP212</b>	<b>MODEL MAKING</b>							<b>SEMESTER-II</b>		
<b>Marks</b>	<b>Internal</b>	<b>60</b>	<b>External</b>			<b>90</b>	<b>Total</b>	<b>150</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>4</b>	<b>Credits</b>			<b>3</b>

**COURSE OBJECTIVE:**

- Acquisition of hands on experience in model – building.
- To understand the suitability of different materials for different design requirements.
- To understand scale of a building and its structural challenges.
- To understand the relation of the building with its surrounding areas.
- To understand the nuances of design detailing in model making.
- The use of replicable materials to attain the best to real model.

**COURSE OUTCOME:**

1. To get hands on experience to handle model making materials.
2. To inculcate in students and understanding of ideas in 3d and physical models.
3. To understand the difference in executing blocks models and detailed models.
4. To understand scale in a building and its relation to a human user.
5. To be able to understand the properties of materials.
6. To understand various site and building levels.

**UNIT – I INTRODUCTION TO MODEL MAKING**

Introduction to concepts of model making and various materials used for model making

**UNIT - II BLOCK MODLLING**

Preparation of base for models using wood or boards. Introduction to block models of buildings (or 3D Compositions) involving the usage of various materials like Thermopolis, Soap/Wax, Boards, Clay etc.

**UNIT - III DETAILED MODELLING**

- Making detailed models which include the representation of various building elements like Walls, Columns, Steps, Windows/glazing, Sunshades, Handrails using materials like Mountboard, Snow- white board, acrylic sheets.
- Representing various your face finishes like brick/stone representation, stucco finish etc.
- Various site elements – Contour representation, Roads/Pavements, Trees/Shrubs, Lawn, Water bodies, Street furniture, Fencing etc.

**UNIT - IV INTERIOR MODELS OF INTERIOR SPACES**

Making models of the various interior spaces such as

- Residences
- Offices
- Retail Spaces
- Recreational Spaces

Scaled models of furniture.

**UNIT – V CARPENTRY**

Introducing the techniques of planning, chiseling & jointing in timber to learn the use of hand tools.

Exercise involving the design of simple furniture and making a model of the same.

**SUGGESTED READINGS**

1. BENN, The book of the House, Ernest Benn Limited, London 2007
2. Janssen, Constructional Drawings & Architectural models, Karl Kramer Verlag Stuttgart, 1973.
3. Harry W. Smith, The art of making furniture in miniature, E.P. Dutton Inc., New York, 1982

<b>18IDS221</b>	<b>INTERIOR DESIGN - II</b>							<b>SEMESTER-II</b>			
<b>Marks</b>	<b>Internal</b>	<b>160</b>	<b>External</b>				<b>240</b>	<b>Total</b>	<b>400</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>12</b>	<b>Credits</b>			<b>8</b>	

### **COURSE OBJECTIVE:**

- To develop an understanding of various degrees of enclosures and various types of relationship between spaces.
- Understanding of the various effects that could be created by manipulating the enclosing elements such as walls, roof etc.
- To understand the design proximity and relation of spaces.
- To understand the basic concepts for the size of the project.
- To develop understanding of the scale, function and options existing when designing small-scale spaces in residences such as toilets, kitchens, living, bedrooms etc.
- Development of ideas with regard to false ceiling, wall paneling, flooring, floor coverings, curtains, windows, doors and other elements of residential interiors.

### **COURSE OUTCOME:**

1. An understanding of the qualities of different elements as well as their composite fusions.
2. An ability to engage and combine the elements of design in spontaneous as well as intentional ways in order to create desired qualities and effects.
3. Development of required skills – observation / analysis / abstractions / interpretation / representations / expressions through models and drawings.
4. To analyze the pre data of the concepts and to introduce design solutions using a creative approach.
5. To be able to describe an understanding that is both in representation and verbally present the same.
6. To update and to introduce various other methodologies to enhance the skill set.
7. The students shall understand the basic functional aspect of designing simple building type and its relevant spatial organization.
8. The students shall be learn to reciprocate and sensitize the design/concept to the environment and the design skill of the project

### **UNIT I DESIGN PROCESS**

Design Process: Evolution from Program and Conditions to Concept & Design - Graphical Representation of the Process. Design Strategies and Methods. Designing in Context; Design & Function; Constituents of Design; Working with materials and Structures; Arriving at Ideas.

### **UNIT II HORIZONTAL MOVEMENT**

Horizontal movement- single bay - passive energy type spaces. Design Exercises shall be simple functional units with universal access compliance such as: Toilet for a physically handicapped person. Hostel room, bed room, kitchen, Shop, Workshop, pavilions, snack bar.

### **UNIT III DESIGN PROBLEMS**

Design problems involving simple space organization. Design Exercises shall be multiple spaces and understanding their inter-relationships, such as: Residence, petrol bunk, fire station, police station, Cottage for an elderly couple

#### **UNIT IV ANTHROPOMETRY**

The study of space standards and anthropometrics related to each problem. Anthropometry as related to physically handicapped and elderly persons is required to be studied. Different Techniques shall be used for presentation.

#### **SUGGESTED READINGS**

1. The Fundamentals of Architecture (Fundamentals (Ava)) (Paperback) by Lorraine Farrelly (Author) 2007
2. Francis D.K.Ching - Architecture - Form Space and Order Van No strand Reinhold Co., 1998
3. Design Methods (Architecture) (Paperback), by John Chris Jones (Author). 1981
4. How Designers Think, Fourth Edition: The Design Process Demystified (Paperback) by Bryan Lawson.2005
  
5. Basics Design Ideas (Paperback) by Bert Bielefeld (Author), Sebastian El khouli (Author). 2007
6. Graphic Thinking for Architects, Paul Laseau.1980
7. Design Drawing, Francis D. K. Ching. 2011
8. The Nature of Design, Peg Faimon & John Weigand. 2004
9. Foundations of Art and Design (Paperback) by Alan Pipes (Author)2017
10. John W.Mills - The Technique of Sculpture, B.T.Batsford Limited, New York - Reinhold Publishing Corporation, London, 1966.
11. C.Lawrence Bunchy - Acrylic for Sculpture and Design, 450, West 33rd Street, New York, N.Y.10001, 1972.
12. The Elements of Graphic Design: Space, Unity, Page Architecture, and Type (Paperback) by Alexander W. White (Author) 2002
13. Geometry of Design: Studies in Proportion and Composition, Kimberly Elam.David Gibson 1951

<b>18IDS222</b>	<b>INTERIOR MATERIALS AND CONSTRUCTION - II</b>						<b>SEMESTER-II</b>			
<b>Marks</b>	<b>Internal</b>	<b>80</b>	<b>External</b>			<b>120</b>	<b>Total</b>	<b>200</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>3</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>5</b>	<b>Credits</b>			<b>4</b>

**COURSE OBJECTIVE:**

- Understanding the basic components of the buildings that envelope a small buildings
- Understanding the different types in each element and different treatments for the same.
- Understanding function of each component of a building like foundation, walls, beams, column, and roofs.
- Understanding simple roof & floor finishes.
- To understand the primary basics of the loading in a structure and the distribution of the load
- To understand the composition and properties of the materials.

**COURSE OUTCOME:**

1. Students learn Interior construction details using naturally occurring building materials.
2. Student are taught to judge the structure before making any structural changes required in renovation.
3. Working format with for materials such as stone, bamboo, mud and lime through drawing as well as doing a literature or live case study.
4. Students are to submit drawing plates comprising of technical plan, elevation and section along with sketches and details showing method of construction.
5. Students will be honing the skills of technical drawings and their representations.
6. Students will be able to use this material knowledge during construction and can find best materials suited for apt activities.

**UNIT-IWALLS-TYPESOFMASONRY**

Different types-Stonewalls-random rubble, coursed rubble, square rubble, polygonal rubble & Ashlar etc  
Brick masonry-Types of bonds-single & double Flemish bond, header bond, stretcher bond, rattrap bond, ornamental bonding.

**UNIT – II FLOORS**

Floor coverings--softwood, hardwood-resilient flooring-linoleum, asphalt tile, vinyl, rubber, cork tiles-terrazzo, marble & granite- properties, uses & lying.  
Floor tiles – ceramic glazed, mosaic and cementtiles-properties, uses and laying, and details for physically handicapped.

**UNIT – III FALSE CEILING**

Construction of various kinds of false ceiling such as thermacol, plaster of paris, gyp board, metal sheets, glass and wood. Construction of domes, vaults, & other special ceilings

**UNIT-IVWALLPANELING**

Paneling-Using wooden planks, laminated plywood, cork sheets, fiber glass wool & fabric for sound insulation and wall paneling for thermal insulation.

**UNIT- V FINISHES**

Paints- enamels, distempers, plastic emulsions, cement based paints- properties, uses and applications-painting on different surfaces –defects in painting, clear coatings &strains-varnishes,lacquer,shellac, waxpolish&strains-properties,usesandapplications.Specialpurposepaints-bituminous,luminous,fire Retardant and resisting paints- properties, uses and applications

**SUGGESTED READING**

1. S.C Rangwala – engineering materials– Charotar publishing, Anand 1982
2. W.B Mckay, building construction, VOL 1-4 , Longmans, u.k 1981
3. Laxmi publications Pvt. Ltd., New Delhi, 1993.
1. Dr. B.C Punmia , building construction, Laxmi publications Pvt. Ltd., New Delhi, 1993.
2. M.S Shetty, concrete technology, S. Chand & co. Ltd., New Delhi, 1986.

<b>18IDS223</b>	<b>INTERIOR GRAPHICS - II</b>						<b>SEMESTER-II</b>			
<b>Marks</b>	<b>Internal</b>	<b>60</b>	<b>External</b>			<b>90</b>	<b>Total</b>	<b>150</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>4</b>	<b>Credits</b>			<b>3</b>

**COURSE OBJECTIVE:**

- To help students to learn & understand the techniques of various methods of drawing
- To make them understand the use of colors & their effects in drawings.
- To understand various geometrical shapes.
- To be able to scale geometry and understand the sizes.
- To understand sciography and its representation.
- To be able to improve different lettering.

**COURSE OUTCOME:**

1. Ability to construct the 3d views and perspective drawings of the Interiors
2. Understanding of advanced documentation and measured drawing techniques.
3. Ability to express design in all dimensions
4. Ability to improve drawing skills.
5. To be able to understand the various measurements of the drawings.
6. To be able to express and exhibit drawings to the best understanding for professional practice.

**UNIT I - MEASURED DRAWING**

Measured drawing of simple objects (like furniture, entrance gates, etc.) and building components (like columns, cornice, door, window, etc.). Detailed measured drawing/documentation of simple monument or building.

**UNIT II - PERSPECTIVE**

Perspective projection concepts, Types of Perspective views, Picture plane, vanishing points, station point, horizon, cone of vision, line of vision, etc. Perspective Projection of simple & complex geometrical forms. Two point perspective of simple objects, outdoor and indoor view of a building, etc. One point and three point perspective of interiors, Human Figures, Landscape elements and Vehicles in Perspective

**UNIT III - SCIOGRAPHY**

Principles of shades and shadows - Shadows of basic shapes and solids; Shadows of architectural elements, etc; Shadows of circular solids; Shadows of buildings, etc.

**UNIT IV - RENDERING TECHNIQUES**

Colour Pencils Rendering, Water Colour Rendering, Pen & Ink Rendering, Marker Rendering Techniques, Using Digital & Mixed Media Rendering Techniques, Free hand drawings

**UNIT V - GRAPHICAL PRESENTATION**

Visual representation of the design scheme – interior and exterior perspective views – shades and shadows – use of various rendering techniques.

### **SUGGESTED READINGS**

1. Francis Ching, Architectural Graphics, Van Nostrand and Reinhold Company, New York, 1975.
2. Edward J.Muller,James G. Fauselt, Philip A. Graw Architecture Drawing and Light Construction Prentice hall Publishers Columbus. 1999.
3. Ernest Norling, Perspective drawing, Walter Foster Art Books, California, 1986.
4. Bernard Alkins - 147, Architectural Rendering, Walter Foster Art Books, 1986.
5. Learn to paint with Water Colours, Acrylic colours, Boats and Harbours, Sketch, Still life, landscapes. Author: Alwyn Cranshaw, Publisher: William Collins Sons & Co. Ltd., London, 1981.
6. Architectural Rendering, A Technique of Contemporary Presentation, Author: Albert O. Halse, Publisher, Mc Graw Hill Book Company, New York, 1972.
7. Elisabetta Drudi, Figure Drawing for Fashion Design, The Pepin Press Singapore. 2001.

<b>18IDT301</b>	<b>FURNITURE DESIGN</b>							<b>SEMESTER-III</b>		
<b>Marks</b>	<b>Internal</b>	<b>40</b>	<b>External</b>			<b>60</b>	<b>Total</b>	<b>100</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>2</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>0</b>	<b>Credits</b>			<b>2</b>

**COURSE OBJECTIVE:**

- To help the student understand day lighting and technology of artificial lighting.
- To equip the student to understand and successfully apply lighting techniques with color effects.
- To understand the various types of furniture's from history to the current date.
- To produce designs that will suit the function, location and the ergonomics.
- To understand different types of lighting and to use apt luminaries and fixture.
- To make different styles of furniture both in modular and in customized.

**COURSE OUTCOME:**

1. Awareness of the role of light and color in design with respect to macro scale of sustainability and ecology as well as in the micro scale of shaping of outdoor environments.
2. Knowledge about the elements of light and color
3. Sensitivity towards evolution of different color combination and realization of color in different lighting.
4. To have to ability to understand the furniture in plans sections and elevation and to have ergonomic detail compliance in every format
5. To be able to make electrical drawings with apt representation and accommodating different types of lighting details.
6. To introduce the idea of detailing in a micro concept of furniture design and to be able to produce products suitable for comfort, function and aesthetics.

**UNIT – I - TYPES OF FURNITURE**

Furniture categories, exploration of the idea of furniture, role of furniture in interior design, Design approaches in furniture design.

Assignment: Measured drawing of a piece of furniture – plan, elevation and drawings on full scale

**UNIT – II – STYLES OF FURNITURES.**

Brief overview of the evolution of furniture from Ancient to present: Various stylistic transformations. Furniture designers and movements. Analysis of furniture in terms of human values, social conditions, technology and design criteria.

**UNIT - III FUNCTION AND UTILITY**

Functional and formal issues in design: study and evaluation of popular dictums such as “Form follows function”, “Form and function are one”, “God is in Details” etc.

Evaluation of visual design: study of Gestalt theory of design – law of enclosure, law of proximity, law of continuity etc.

Human factors, engineering and ergonomic considerations: principles of universal design and their application in furniture design.

**UNIT – IV PROCESS OF MANUFACTURE**

An introduction of various manufacturing processes most frequently adopted in furniture design such as Injection Molding, investment casting, sheet metal work, die casting, blow- molding, vacuum - forming etc.



## **UNIT – V EXERCISE**

Seating Design: Different types of seating with a focus on the following –

- Functionality
- Aesthetics
- Style
- Human factors and ergonomics

The other component to be considered is the cost of the designed furniture piece.

Assignment: Design with wood, metal and combination of materials. Drawings, details and prototype making. Market survey of available products and economics of products.

## **UNIT – VI STORAGE**

Storage systems: Functional analysis of storage systems and thereby deriving types of cabinets needed for interior spaces – kitchen cabinets, wardrobes closets, book cases, show cases, display systems etc.

Assignment: Exercise to design kitchen cabinets for a given kitchen.

## **UNIT –VII MODULAR**

Modular approach to furniture design – various materials, combination of materials and its application – design parameters, ergonomics etc. Drawings and prototype. Survey of several modular systems available for different functions in the market. Exploration of wood, metal, glass, plastics, FRP as materials for system design. Cost criteria of furniture design. Assignments: Typology of furniture with respect to the different states in India.

Design for middle and lower middle income groups- elements of living units, education institutes, health facilities, street elements etc.

## **SUGGESTED READINGS**

1. Joseph Aronson, The Encyclopedia of Furniture: Third Edition, 1961
2. Bradley Quinn, Mid-Century Modern: Interiors, Furniture, Design Details, Conran Octopus Interiors, 2006.
3. Jim Postell, Furniture Design, Wiley publishers, 2007.
4. Edward Lucie-Smith, Furniture: A Concise History (World of Art), Thames and Hudson, 1985
5. Robbie. G. Blakemore, History of Interior Design and Furniture: From Ancient Egypt to Nineteenth-Century Europe, Wiley publishers, 2005.
6. John.F. Pile, Interior Design, 2nd edition, illustrated, H.N.Abrams, 1995.

<b>18IDT302</b>	<b>INTERIOR SERVICES I- PLUMBING &amp; WATER SUPPLY</b>						<b>SEMESTER-III</b>			
<b>Marks</b>	<b>Internal</b>	<b>40</b>	<b>External</b>			<b>60</b>	<b>Total</b>	<b>100</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>3</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>0</b>	<b>Credits</b>			<b>2</b>

**COURSE OBJECTIVE:**

- To understand hennaed and applications of water supply and sanitation in buildings with exposure to various fixtures and fittings,
- water supply and sanitary installations at work sites.
- To understand the practical course of water sanitation needs both outdoors and indoor.
- To arrive at various calculation of tanks and sumps to physically build it in the site.
- To understand the basic toilet design
- To understand the services piping in large scale projects.

**COURSE OUTCOME:**

1. Understanding of water supply, sewage, drainage and waste systems in buildings.
2. Ability to conceptually plan/ design the above for a given simple context.
3. Awareness of sustainable principles and best practices.
4. To be able to understand the need and execution of dry ad wet concepts in toilets.
5. To understand the differences and treatments for water, sewage and sullage disposal systems.
6. To understand the technical issues during the servicing of the pipes, and the importance of ducts in larger scale of buildings.
7. To understand various water sources and its uses.

**UNIT I WATER SUPPLY IN BUILDINGS**

Standard of portable water and methods of removal of impurities, Consumption order of water for domestic purposes, Service connection from mains, House-service design, tubewell, pumping of water, types of pumps, cisterns for storage

**UNIT II BUILDING DRAINAGE**

Layout, Principles of drainage, Trap type, materials and functions, Inspection chambers, Design of Septic tanks and soak pits, Ventilation of house drains  
Anti-syphonage or vent pipes, one and two pipe systems  
Sinks, bath tub, water closets, flushing cisterns, urinals, wash basins, bidet, shower panel etc.

**UNIT III PLUMBING**

- Common hand tools used for plumbing and their description and uses, Joints for various types of pipes, Sanitary fitting standards for public conveniences
- Different types of pipes and accessories for water supply, controlling fixtures like valves, taps, etc. Fittings and Choice of materials for piping: cast iron, steel, wrought iron, galvanized lead, copper, cement
- concrete and asbestos pipes, PVC pipes
- Sizes of pipes and taps for house drainage, testing drainage pipes for leakage-smoke test, water test etc, CI pipes for soil disposal and rain water drainage, Wrought iron, steel and brass pipes.
- Rainwater disposal drainage pipes spouts, sizes of rainwater pipes

**UNIT IV SOLID WASTE DISPOSAL**

Solid wastes collection and removal from buildings. On-site processing and disposal methods. Aerobic and anaerobic decomposition

**UNIT V SERVICES STUDIO**

Preparation of plumbing layout of a single storey building & working drawings of various fittings and fixtures of water supply and sanitary installations.

### **SUGGESTED READINGS**

1. Charangith shah, Water supply and sanitary engineering, Galgotia Publishers 2002
2. AKamala&DLKanthRao, Environmental Engineering, Tata McGraw–Hill publishing Company Ltd 1993
3. Technical teachers Training Institute (Madras), Environmental Engineering, Tata McGraw – Hill publishing Company Limited 1988
4. Marrimuthu, Murugesan, Padmini, Balasubramanian, *Environmental Engineering*, Pratheeba publishers 1986
5. S.C. Renewal, Watersupply and sanitary engineering, Charotar publishing house

<b>18IDP311</b>	<b>COMPUTER APPLICATIONS - II</b>						<b>SEMESTER-III</b>			
<b>Marks</b>	<b>Internal</b>	<b>60</b>	<b>External</b>			<b>90</b>	<b>Total</b>	<b>150</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>4</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>0</b>	<b>Credits</b>			<b>3</b>

**COURSE OBJECTIVE:**

- To make them digitally strong in the design related software.
- To make them understand and realize beautiful presentations.
- Understand #D nuances related to this subject.
- To represent ideas using technology and to be update in the use of softwares.
- To introduce to basic features of Artificial intelligence
- To Use software that are related to to BIM

**COURSE OUTCOME:**

1. Ability to express using digital tools in the realm of visual composition, drafting.
2. Ability to express using digital tools 3D visualization and rendering
3. To be able to represent ideas digitally for client understanding.
4. To understand the design in 3d to ensure the elimination of design flaws when translated from 2 d
5. To understand BIM and its overall structure.
6. To induce digital drawing reading and performing capacity.

**UNIT – I INTRODUCTION TO COMPUTER AIDED 2D DRAFTING**

Understanding the use of drawing tools, object editing, drawing objects, filing and setting drawing units, scales, limits that size and dimensioning, lettering. Setting up of drawing of various simple objects with Complete text and dimensioning.

**UNIT – II ADVANCE COMPUTERAIDED 2D DRAFTING 20**

Advance command programming– Transparent overlays, hatching utilities, assigned color and line type, use of multi-line, style, block, symbol library, manipulation for accurate drawings, incorporating the above mentioned utilities.

**UNIT – III PRODUCTIVITY TOOLS**

Introduction to tools of productivity–Blocks, slide facilities, script files and attributes. Understanding concepts of View port, concept of object linking and editing session.

**UNIT – IV INTRODUCTION TO 3D DRAFTING**

Introduction to 3D Modeling techniques and construction planes, drawing objects, 3D surfaces, setting up elevation and thickness, and use of dynamic projections. Solid modeling with driving, primitive command and Boolean operations. Use of region modeling & solid modifiers.

**SUGGESTED READINGS**

1. V. Rajaraman, principles of Computer Programming –Prentice Hall of India 1983
2. Byron S. Gottfried, Theory and Problems of Programming with C. Schaum's outline series, McGraw Hill Publishing Co. 1980
3. Auto CAD Reference Manual – Autodesk UNC, 1998
4. Sham Tickoo, Understanding Auto CAD– 14

<b>18IDP312</b>	<b>WORKSHOP ( WOOD, CANE&amp; BAMBOO ENGINEERED WOOD, GLASS, STONE)</b>						<b>SEMESTER-III</b>			
<b>Marks</b>	<b>Internal</b>	<b>60</b>	<b>External</b>			<b>60</b>	<b>Total</b>	<b>150</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>0</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>6</b>	<b>Credits</b>			<b>3</b>

**COURSE OBJECTIVE:**

- To understand the basic methods of furniture making with focus on hands
- on methods regarding workshop practices in wood, metal, plastic, textiles etc.to understand the usage of various materials as required with its properties.
- To understand the usage of engineered wood against the solid wood.
- To understand the fixing details of multiple materials and its interaction with each other.
- To be introduced to alternate materials
- To relate the various capacities into creative pursuits of design.

**COURSE OUTCOME:**

1. Ability to understand and construct furniture to live size
2. understanding the scale of drawing to life size
3. To use tools related to wood glass and alternative substitution to wood.
4. To understand properties and usage of materials henceforth.
5. To understand modular furniture through engineered wood.
6. To understand the various capacities of hardware for the various materials.

To understand wood joints and its usage in various circumstances

**UNIT – I: WOOD**

Types of wood –natural and artificial and its properties

Engineered wood – plywood, MDF, HDF, Etc

Working with wood and wood products to understand material parameters. Wooden joinery and its strength.

Wood polishes and other finishes – color and surface quality. Laminates also should be treated as one of the wood finishes with lapping and other techniques

**UNIT – II: SCALES**

Making of elements of various scales in the built form such as interior space making elements, furniture forms, various products, Art & Artifacts by using wood.

**UNIT – III: ALTERNATIVE MATERIALS**

Introduction to cane, bamboo, working with bamboo/cane and their products to understand material parameters. Bamboo and cane joinery and its strength. Polishes and other finishes. Understanding the material and tools by making objects which allow students to explore the forms, surfaces, textures and patterns. Explore different joinery, support conditions, and woven surfaces.

**UNIT – IV: GLASS**

Working with glass and understand blowing techniques, hardware fixing, polishing, etching, sand blasting techniques of the glass material. Understanding of the properties and using the same in an exercise to create 3d model with glass. Also understanding the usage and fixing of glass in various interior models.

### **SUGGESTED READINGS**

1. Carol Stangler, The crafts and art of Bamboo, Rev. updated edition, Lark books, 2009.
2. Dr Angelika Taschen, Bamboo style: Exteriors, Interiors, Details, illustrated edition, 2006.
3. Albert Jackson & David Day, The complete manual of wood working, knopf publishers, 1996.
4. Lonnie Bird, Jeff Jewitt, Thomas lie- Nielsen, Taunton's Complete Illustrated Guide to Woodworking, Taunton, 2005.
5. Peter Korn, Wood working Basics: Mastering the essentials of craftsmanship, Taunton , 2003.

18IDS321	INTERIOR DESIGN - III							SEMESTER-III		
Marks	Internal	160	External			240	Total	400	Exam Hours	3
Instruction Hours/Week	L	0	T	0	P/S	12	Credits			8

### COURSE OBJECTIVE:

- To develop an understanding of various degrees of enclosures and various types of relationship between spaces.
- Understanding of the various effects that could be created by manipulating the enclosing elements such as walls, roof etc.
- To understand the design proximity and relation of spaces.
- To understand the basic concepts for the size of the project.
- To develop understanding of the scale, function and options existing when designing small-scale spaces in residences such as toilets, kitchens, living, bedrooms etc.
- Development of ideas with regard to false ceiling, wall paneling, flooring, floor coverings, curtains, windows, doors and other elements of residential interiors.

### COURSE OUTCOME:

1. An understanding of the qualities of different elements as well as their composite fusions.
2. An ability to engage and combine the elements of design in spontaneous as well as intentional ways in order to create desired qualities and effects.
3. Development of required skills – observation / analysis / abstractions / interpretation / representations / expressions through models and drawings.
4. To analyze the pre data of the concepts and to introduce design solutions using a creative approach.
5. To be able to describe an understanding that is both in representation and verbally present the same.
6. To update and to introduce various other methodologies to enhance the skill set.
7. The students shall understand the basic functional aspect of designing simple building type and its relevant spatial organization.
8. The students shall be learn to reciprocate and sensitize the design/concept to the environment and the design skill of the project

### UNIT – I SHOPS

Planning for retail activity – anthropometrics – types of Shop layouts Modular units. Materials used in counters, shelves, worktops, their comparative study. Lighting & colour scheme – natural & artificial light.

### UNIT – II COMMERCIAL SPACES

The art of selling-displays/products/marketing, design of display units, design of boutiques, showrooms. Concepts in modern day Retail interiors – materials & finishes – colour, texture & pattern.

### UNIT – III SHOPPING MALLS

Product display – windows/internal displays/hierarchy of product display/power of visual communication/graphics Exhibition spaces – display for exhibition Lighting design for commercial spaces – task/display/atmospheric/focal lighting Coloring commercial spaces – coding/decoding/visual communication Design of commercial Environments such as Malls, Shopping Arcades Etc.

The list of suggested topics to be covered as design problems:

Single room residence, Doctor's clinic, kindergarten school, Architect's studio, Small cafeteria, Bank extension counter, Departmental store, local police station, local post office, products used by architects in the studio, products for children in kindergarten etc.

**Note:** At least two major exercises and two minor design/time problems should be given.

In the end exam, which is a viva-voce the students have to present the entire semester work for assessment.

#### **SUGGESTED READINGS**

1. Karlen Mark, Space planning Basics, Van Nostrand Reinhold, New York, 1992.
2. Joseph D Chiara, Julius Panero, & Martin Zelnick, Time Saver standards for Interior Design & space planning, 2nd edition, Mc-Graw Hill professional, 2001.
3. Francis.D. Ching & Corky Bingelli, Interior Design Illustrated, 2nd edition, Wiley publishers, 2004.
4. Julius Panero & Martin Zelnick, Human Dimension & Interior Space : A source book of Design Reference standards, Watson – Guptill, 1979.
5. Maureen Mitton, Interior Design Visual Presentation: A Guide to Graphics, Models, and Presentation Techniques. John Wiley and Sons, 2003
6. Mark.W. Lin, Drawing and Designing with Confidence: A step-by-step guide, Wiley and Sons, 199



<b>18IDS322</b>	<b>ADVANCED MATERIALS AND APPLICATIONS</b>						<b>SEMESTER-III</b>			
<b>Marks</b>	<b>Internal</b>	<b>80</b>	<b>External</b>			<b>120</b>	<b>Total</b>	<b>200</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>6</b>	<b>Credits</b>			<b>4</b>

**COURSE OBJECTIVE:**

- Understanding the basic components of the buildings that envelope a small buildings
- Understanding the different types in each element and different treatments for the same.
- Understanding function of each component of a building like foundation, walls, beams, column, and roofs.
- Understanding simple roof & floor finishes.
- To understand the primary basics of the loading in a structure and the distribution of the load
- To understand the composition and properties of the materials.
- To understand the various components of interior space as doors, windows, staircases.

**COURSE OUTCOME:**

1. Students learn Interior construction details using naturally occurring building materials.
2. Student are taught to judge the structure before making any structural changes required in renovation.
3. Working format with for materials such as stone, bamboo, mud and lime through drawing as well as doing a literature or live case study.
4. Students are to submit drawing plates comprising of technical plan, elevation and section along with sketches and details showing method of construction.
5. Students will be honing the skills of technical drawings and their representations.
6. Students will be able to use this material knowledge during construction and can find best materials suited for apt activities.
7. To inculcate in students and understanding of ideas in 3d and physical models.

**UNIT- I DOORS**

Types including, open able, sliding, folding pivoted Lodged and braced, paneled doors, glazed doors, Joinery details for doors.

**UNIT – II PARTITIONS**

Details of fixed, sliding and sliding and folding partitions with wood, steel and aluminum frames & panels in glass, particle board, MDF, gyp board and plywood.

Types according to profile– straight flight, doglegged, quarter turn, half turn, bifurcated, spiral& helical.

Types based on materials (timber, wood, steel, synthetic materials). Details of handrails & balusters.

Designing and detailing for physically handicapped

**UNIT – III TIMBERWINDOWS**

Types –Casement, fixed, horizontal sliding, vertical sliding, pivoted, and top hung types

Ventilators- top hung, bottom hung, pivoted, louvered, fixed types. Joinery details for windows, ventilators

**UNIT – IV WINDOWS IN STEEL AND ALUMINIUM**

Details of sliding and open able windows in aluminum and steel frames with glazed panels

**UNIT – V STAIRCASE**

Types according to profile– straight flight, doglegged, quarter turn, half turn, bifurcated, spiral& helical.

Types based on materials (timber, wood, steel, synthetic materials). Details of handrails & balusters.

Designing and detailing for physically handicapped

## **SUGGESTED READINGS**

1. Dr. B.C Punmia, building
2. construction, Laxmi publications Pvt. Ltd., New Delhi, 1993.
3. M.S Shetty, concrete technology, S. Chand & co. Ltd ., New Delhi , 1986
4. S.C Renewal – engineering materials– Charotar publishing, Anand 1982
- 4 W.B McKay, building construction, VOL. 1-4 , Longmans, u.k 1981
- 5 Laxmi publications Pvt. Ltd., New Delhi, 1993.

<b>18IDS323</b>	<b>INTERIOR LANDSCAPE</b>							<b>SEMESTER-III</b>		
<b>Marks</b>	<b>Internal</b>	<b>60</b>	<b>External</b>			<b>90</b>	<b>Total</b>	<b>150</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>0</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>6</b>	<b>Credits</b>		<b>3</b>	

**COURSE OBJECTIVE:**

- To develop an understanding about the design of interior landscape
- To give special emphasis on the choice and care of plant materials used in the interior spaces.
- To study about the various landscaping elements and their application in interior spaces.
- To develop and understanding between outdoor and indoor landscape areas.]
- To have apt knowledge of the regional or vernacular plantation to use in particular regions and climates.
- To understand the various features using natural and manmade elements in landscape detailing.

**COURSE OUTCOME:**

1. Awareness of the role of landscape design with respect to macro scale of sustainability and ecology as well as in the micro scale of shaping of outdoor environments.
2. Knowledge about the elements of landscape design and their scope.
3. Sensitivity towards evolution of different garden and landscape design across time and context.
4. An understanding of landscape design with respect to site planning and different functional typologies of spaces
5. To use landscape according to the region, climate location and other detail.
6. To understand and provide physical requirements for plants to keep it in the living condition and maintenance of the same.

**UNIT – I INTERIOR LANDSCAPING**

Definition, classification of plants, indoor plants and their functions, layout & components, Floriculture– Commercial, ornamental, Selection of plants & pest control.

**UNIT – II PHYSICAL REQUIREMENTS OF PLANTS**

Physical requirements of plants–light, temperature, water, planting medium, soil separator, weight of plants, acclimatization & maintenance.

Techniques to meet physical requirements.

**UNIT – III INTERIOR LANDSCAPING ELEMENTS & PRINCIPLES**

Various interior landscaping elements – water bodies- pools, fountains, cascades

Plants, rocks, artifacts, paving & lighting, Design guidelines-plant texture & color, plant height, plant spacing.

**UNIT – IV ROOF AND DECK LANDSCAPE**

Protection of the integrity of the roof and structure, provisions for drainage, light weight planting medium, irrigation, selection of materials, water proofing, provision for utilities and maintenance.

**UNIT – V EXERCISE ON INTERIOR LANDSCAPE**

- Courtyard design
- An outdoor room design
- Terrace garden

**SUGGESTED READINGS**

1. Time saver standards for landscape architecture. 2014
2. Planting design by Theodore D.Walker, VNR Publications New York. 1987
3. Landscaping Principles and Practices by Jack E.Ingels, Delmar Publishers. 1987

<b>18IDT401</b>	<b>LIGHT AND COLOR</b>							<b>SEMESTER-IV</b>		
<b>Marks</b>	<b>Internal</b>	<b>40</b>	<b>External</b>			<b>60</b>	<b>Total</b>	<b>100</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>2</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>0</b>	<b>Credits</b>		<b>2</b>	

**COURSE OBJECTIVE:**

- To help the student understand day lighting and technology of artificial lighting.
- To equip the student to understand and successfully apply lighting techniques with color effects.
- To understand the various types of furniture's from history to the current date.
- To produce designs that will suit the function, location and the ergonomics.
- To understand different types of lighting ad to use apt luminaries and fixture.
- To make different styles of furniture both in modular and in customized.

**COURSE OUTCOME:**

1. Awareness of the role of light and color in design with respect to macro scale of sustainability and ecology as well as in the micro scale of shaping of outdoor environments.
2. Knowledge about the elements of light and color
3. Sensitivity towards evolution of different color combination and realization of color in different lighting.
4. To have to ability to understand the furniture in plans sections and elevation and to have ergonomic detail compliance in every format
5. To be able to make electrical drawings with apt representation and accommodating different types of lighting details.
6. To introduce the idea of detailing in a micro concept of furniture design and to be able to produce products suitable for comfort, function and aesthetics

**UNIT- I INTRODUCTION TO DAYLIGHTING**

Nature flight–Wave length, Photometric quantities–intensity,Flux,illumination and luminance, visual efficiency, sources of light, day light factor concept, design sky concept, day lighting requirements.

**UNIT – II ARTIFICIAL LIGHTING**

Electric lamps – incandescent, fluorescent, sodium vapor, mercury, halogenandneon. Different types of lights in interior and exterior – task lighting, special purpose lighting. Calculation of artificial lighting, Guidelines for lighting design, Glare in artificial lighting.

**UNIT – III EFFECT OFCOLOR IN LIGHTING**

Colors, color schemes - Monochromatic, analogous, complementary color schemes, triadic and tetradic schemes, effects of color in different areas, color temperature, psychological effects of color in interiors, Factors affecting color, Prang theory – Color wheel, Munsellsystem and Oswald system.

**UNIT - IV LUMINARES& FIXTURES**

Definition, different luminaries for lighting, lighting control system- benefits & application, Impact of lighting, fixture types - free standing or portable, fixed, light fixture control. Lighting accessories- switches, sockets, fused connection units, lamp holders, ceiling roses etc.

**UNIT - V CASESTUDY**

Study of projects based on different lighting concepts used in interiors and exteriors.

**SUGGESTED READINGS**

1. The Art of living- Randall whitehead, 2003
2. Lighting design, sourcebook- Randall whitehead, 2002
3. Light right- M.K.Halpeth,T.Senthil kumar, G.Harikumar 2004
4. Conceptsof lighting, Lighting design in Architecture- Torquil Barker 1997

<b>18IDT402</b>	<b>INTERIOR SERVICES II – ELECTRICAL WIRING, LIGHTING AND AIR CONDITIONING</b>						<b>SEMESTER-IV</b>			
<b>Marks</b>	<b>Internal</b>	<b>40</b>	<b>External</b>			<b>60</b>	<b>Total</b>	<b>100</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>3</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>0</b>	<b>Credits</b>		<b>2</b>	

**COURSE OBJECTIVE:**

- To understand the need and application so air conditioning,
- To understand the need and aptness for areas that requires acoustics.
- To provide details of electrification and mechanical services in buildings with exposure to various systems, methods and fixtures.
- To be able to provide fire safety standards to buildings that are specified in the byelaws.
- To understand sound insulation methods and to be able to insulate rooms based of the decibel levels that will be required to be maintained.
- To understand the refrigeration process and to be able to execute the best system based on the function and need of the AC in buildings.

**COURSE OUTCOME:**

1. Understanding basic concepts of air-conditioning and to be able to produce suitable drawings for execution of the same in the building drawings.
2. To be able to calculate the load on air-condition and to be able to suggest the power and input required for the cooling system.
3. To produce suitable electrification and mechanical methods for the cooling system.
4. To understand the need of heating system and to understand the provision of the same and to understand the difference between the cooling and heating systems.
5. Ability to conceptually plan/ design the above for a given simple context.
6. Awareness of sustainable principles and best practices along with acoustics and detailing.

**UNIT I BASICCONCEPTS ANDSYSTEM COMPONENTS IN AIR CONDITIONING**

Vapour compression cycle – Compressors – Evaporators –Refrigerant control devices – Electric motors – Air handling units – Cooling towers.

**UNIT – II AIR-CONDITIONING SYSTEM AND APPLICATIONS**

Window type and packaged air conditioners –Chilled water plants –Fan coiled systems–Water piping–Cooling load. - Air-conditioning systems for different types of buildings – Duct lay out etc.

**UNIT III FIRE SAFETY**

Mechanism of fire spread in building and prevention – Fire safety standards– Concepts in fire protection – Fire fighting installation and requirements- Heat sensitive detectors –Smoke detectors –Automatic water sprinkler system- Foam systems.

**UNIT IV ACOUSTICS AND SOUND INSULATION**

Room acoustics - resonance, reverberation, echo, and reverberation time, simple exercise using Sabine’s formula.-Acoustical requirements of different types of building. – Sound absorption, absorption co-efficient and their measurements, Absorbing materials used and their choices, exercises involving reverberation time and absorption co-efficient. Sound insulation materials

**UNIT VELECTRICAL SYSTEMS**

Single/Three phase supply– Protective devices in electrical installation — ISI Specifications - Types of wires, Wiring systems and their choice –Planning electrical wiring for building interiors – Main and Distribution boards- Typical Electrical layout for interiors.

## **SUGGESTED READINGS**

1. M.H.Lulla, Air conditioning 2003
2. V.K.Jain, Fire Safety in Buildings. 2012
3. Peter templeton & Saunders – Detailing for architectural acoustics –Architectural press, 1994
4. R.G.Hopkinson and J.D.Kay, the Lighting of Buildings, Faber and Faber, London, 1996

Note: Detailed acoustic design and lighting should be done for any one type of building.

<b>18IDP411</b>	<b>COMPUTER APPLICATIONS - III</b>						<b>SEMESTER-IV</b>			
<b>Marks</b>	<b>Internal</b>	<b>60</b>	<b>External</b>			<b>90</b>	<b>Total</b>	<b>150</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>4</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>0</b>	<b>Credits</b>			<b>3</b>

**COURSE OBJECTIVE:**

- To make them digitally strong in the design related software.
- To make them understand and realize beautiful presentations.
- Understand #D nuances related to this subject.
- To represent ideas using technology and to be update in the use of softwares.
- To introduce to basic features of Artificial intelligence
- To Use software that are related to to BIM
- To help the student understand the technology of computer and its terminology.
- To enable the student to understand the applications of the software and graphic system.

**COURSE OUTCOME:**

1. Ability to express using digital tools in the realm of visual composition, drafting.
2. Ability to express using digital tools 3D visualization and rendering
3. To be able to represent ideas digitally for client understanding.
4. To understand the design in 3d to ensure the elimination of design flaws when translated from 2 d
5. To understand BIM and its overall structure.
6. To induce digital drawing reading and performing capacity.
7. Ability to express using digital tools in the realm of visual composition, drafting, 3D visualization and rendering

**UNIT – I**

Starting Auto CAD: Introduction to the menu, starting drawings from scratch. Creating and using templates-starting drawings with setup wizards. Saving and closing a file.  
Using co-ordinate systems – The UCS. Working with Cartesian and polar coordinate systems. Using displays with shortcuts.

**UNIT – II**

Setting up the drawing environment – setting the paper size, setting units, grid limits, drawing limits, snap controls. Use of paper space and model space.  
Basic commands dealing with drawing properties: Layer control, change properties, line weight control, etc.  
Inquiry methods: Using data base information for objects, calculating distance, angle, areas etc.

**UNIT – III**

Dimensioning commands and blocks: Dimensioning the objects in linear, angular fashions along with quick time dimensioning etc. Creating and working with blocks, creating symbols, use of blocks in creating a layout, of a residential area- one exercise to be done as lab assignment.

**UNIT – IV**

Orientation towards 3D: 2D to 3D conversion, perspective view, walk through the layout.  
3D-Max: Understanding 3D, theory behind 3D modeling. Preparing for construction of 3D models.  
Construction of 3D surface models- extrusion, wire frame, creation of a shell, elaborates surfaces.

**UNIT –V**

Solid modeling: concepts behind solid modeling, composite solids creation and modification, solids display and inquiry. Rendering and presentation. Printing and plotting.

### **SUGGESTED READINGS**

1. Teyapoovan. T., Engineering Drawing with Auto CAD 2000. Vikas Pub House Pvt Ltd, New Delhi, 2000.
2. Parker, Daniel and Rice, Habert. Inside Auto CAD Daniel, 1987.
3. Geomura, Auto CAD, Release 2000.
4. Oscar Riera Ojed , Lucast Guerre, Hyper realistic Computer Generated Architectural Renderings . 1996
5. Giuliano Zampi Conway Lloyd Morgan, Virtual Architecture 1998



<b>18IDP412</b>	<b>WORKSHOP</b>							<b>SEMESTER-IV</b>		
<b>Marks</b>	<b>Internal</b>	<b>60</b>	<b>External</b>			<b>90</b>	<b>Total</b>	<b>150</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>0</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>6</b>	<b>Credits</b>			<b>3</b>

**COURSE OBJECTIVE:**

- To understand the basic methods of furniture making with focus on hands
- on methods regarding workshop practices in wood, metal, plastic, textiles etc.to understand the usage of various materials as required with its properties.
- To understand the usage of engineered wood against the solid wood.
- To understand the fixing details of multiple materials and its interaction with each other.
- To be introduced to alternate materials
- To relate the various capacities into creative pursuits of design. To understand the basic methods of furniture making with focus on hands on methods regarding workshop practices in metal
- To understand the joineries and also understand the properties in these materials. This will help them add new elements into their design which could be their own personal ideas.

**COURSE OUTCOME:**

1. Ability to understand and construct furniture to live size
2. understanding the scale of drawing to life size
3. To use tools related to wood glass and alternative substitution to wood.
4. To understand properties and usage of materials henceforth.
5. To understand modular furniture through engineered wood.
6. To understand the various capacities of hardware for the various materials.
7. To understand wood joints and its usage in various circumstances.
8. Ability to understand and construct furniture to live size understanding the scale of drawing to life size
9. To use tools related to metal and alternative substitution to metal and combination of wood, glass and metal.

**UNIT – I TO 5**

Types of metals, properties of metals, definitions of terms with reference to properties and uses of metals, various methods of working with metals, fixing and joinery in metals, finishing and treatment of metals., finishes on metals. Standard specifications.

Metals in built form activity – horizontal, vertical and inclined surfaces – in interior environment elements-products and furniture forms- doors, windows, jalties, railing, stair etc. Metals and other materials – form and joinery.

Note: Learning should be by feel and working with metals to explore design.

### **SUGGESTED READINGS**

1. John .F. Pile, Interior Design, Harry. N Abrams, Inc. New York . 1995.
2. Ron Fournier, Metal Fabricator`s Handbook, Rev. Illustrated edition, HP Books, 1990.
3. Stanford Hohauser, Architectural and Interior models, Van Nostrand Reinhold, 1970.

<b>18IDS421</b>	<b>INTERIOR DESIGN - IV</b>							<b>SEMESTER-IV</b>			
<b>Marks</b>	<b>Internal</b>	<b>160</b>	<b>External</b>				<b>240</b>	<b>Total</b>	<b>400</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>0</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>12</b>	<b>Credits</b>			<b>8</b>	

**COURSE OBJECTIVE:**

- Space planning process (block diagram, concept statement)
- Furniture
- Historic style
- Structural integration
- Material selection
- Color
- Rendering
- Design Process/methodology
- Creativity /originality
- Documenting space (sketch and photo documentation)
- Anthropometry and ergonomics
- Graphic design (page layout and composition)
- Concepts sketching
- Application of design principles and elements
- Portfolio development

**COURSE OUTCOME:**

1. Ability to collect, assimilate and integrate knowledge in a holistic manner.
2. Sensitivity towards the nature and values of unselfconscious and collective design as well as the interconnectedness of human society and environment
3. Ability to observe and analyze changes in the above.
4. Development of required skills – observation / analysis / abstractions / interpretation / representations / expressions through models and drawings.
5. To analyze the pre data of the concepts and to introduce design solutions using a creative approach.
6. To be able to describe an understanding that is both in representation and verbally present the same.
7. To update and to introduce various other methodologies to enhance the skill set.
8. The students shall understand the basic functional aspect of designing simple building type and its relevant spatial organization.
9. The students shall be learn to reciprocate and sensitize the design/concept to the environment and the design skill of the project

The list of suggested topics to be covered as design problems:

- Thematic space making with Art and craft forms of our own culture in India – East, West, North, Central and so on.
- Design of living units of various geographical locations and culture by involving historical periods, styles and use of craft in its inherent quality and form – craft and living environment.
- Applications of art / craft at public level spaces- lounge (hotel), restaurant of specific ethnic characteristics.
- Response to today’s situation of urban society – For a given building create contemporary homes of modern society – needs, realities, value system etc.

**Note:** At least two major exercises and two minor design/time problems should be given.

In the end exam, which is a viva-voce the students have to present the entire semester work for assessment.

## **SUGGESTED READINGS**

1. Karlen Mark, Space planning Basics, Van Nostrand Reinhold, New York, 1992.
2. Joseph D Chiara, Julius Panero, & Martin Zelnick, Time Saver standards for Interior Design & space planning, 2nd edition, Mc-Graw Hill professional, 2001.
3. Francis.D. Ching & Corky Bingelli, Interior Design Illustrated, 2nd edition, Wiley publishers, 2004.
4. Julius Panero & Martin Zelnick, Human Dimension & Interior Space : A source book of Design Reference standards, Watson – Guptill, 1979.
5. Maureen Mitton, Interior Design Visual Presentation: A Guide to Graphics, Models, and Presentation Techniques. John Wiley and Sons, 2003
6. Mark.W. Lin, Drawing and Designing with Confidence: A step-by-step guide, Wiley and Sons, 1993.
7. Robert Rengel, Shaping Interior Space, Fairchild Books & Visuals ,2002
8. Neufert Ernest, Architect's Data, Granada pub. Ltd. London, 2000.
9. John F. Pile, A history of interior design, Laurence King Publishing, 2005.
10. Robin D. Jones, Interiors of Empire: Objects, Space and Identity within the Indian Subcontinent, Manchester University Press; illustrated edition, 2008

<b>18IDS422</b>	<b>FURNITURE CONSTRUCTION DETAILING &amp; MODULAR / CUSTOM MADE</b>						<b>SEMESTER-IV</b>			
<b>Marks</b>	<b>Internal</b>	<b>60</b>	<b>External</b>			<b>90</b>	<b>Total</b>	<b>150</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>6</b>	<b>Credits</b>			<b>3</b>

**COURSE OBJECTIVE:**

- To help the student understand day lighting and technology of artificial lighting.
- To equip the student to understand and successfully apply lighting techniques with color effects.
- To understand the various types of furniture’s from history to the current date.
- To produce designs that will suit the function, location and the ergonomics.
- To make different styles of furniture both in modular and in customized.
- During this semester students will focus on the craft of the Furniture -Maker, utilizing state of-the-industry procedures and equipment. Emphasis will be on wood and wooden products as a construction medium

**COURSE OUTCOME:**

1. Awareness of the role of light and color in design with respect to macro scale of sustainability and ecology as well as in the micro scale of shaping of outdoor environments.
2. Knowledge about the elements of light and color
3. Sensitivity towards evolution of different color combination and realization of color in different lighting.
4. To have to ability to understand the furniture in plans sections and elevation and to have ergonomic detail compliance in every format
5. To introduce the idea of detailing in a micro concept of furniture design and to be able to produce products suitable for comfort, function and aesthetics.
6. Ability to construct the and understand the furniture design and detailing..
7. Understanding the anthropometry of the furniture and materials used to crate comfort and aesthetics.

**UNIT – I INTRODUCTION TO WOOD**

Wood as a building material: Identification, selection, application, types of wood, commercial Classification, nomenclature, structure Anatomy and Ultra structure, Conversion figure and natural defects, availability of wood products, wood based panels such as plywood ,MDF,HDF, Particle board , pre laminated boards etc.

**UNIT – II THE BASICS OF FURNITURE CONSTRUCTION & TOOLS**

Measurement and measurement systems, Furniture Construction: Drawers, Cadenza, dining chairs, sofa, settee, cots detail. Preparation for finishing, Furniture Materials Specifying timber, finishes etc . Detailed construction drawings & explaining construction and material finishes.

**UNIT – III PLYWOOD CONSTRUCTION TECHNIQUES**

Plywood as building material, Layout techniques and machining plans. Fabrication techniques - stapling, gluing. Furniture Joinery - screw joinery, nail joinery, Mortise& tenon joints, Dovetail joints, Dowel joints, Edge joints.

**UNIT – IV MODULAR KITCHENS**

Modular kitchens, components basis of Construction involving, layouts, carcass, hardware selection, fixing details finishes and special types such as tall units, grain trolleys, and carousels fold outset. A detailed project involving the design of a small kitchen using modular components.

## **UNIT – V FURNITURE MODEL MAKING**

Preparation of block models of furniture using wood, boards, leather, fabric, thermacol, clay, soap/wax etc.

### **SUGGESTED READINGS**

1. S. C. Renewal - Engineering materials – Charotar Publishing, Anand 1980
2. Francis D. K. Ching - Building Construction Illustrated, VNR, 1975,
3. Fevicol Furniture series
1. W.B.Mckay –Building construction Vol1 –Longmans, UK 1981
2. W.B.Mckay –Building construction Vol3 –Longmans, UK 1981

<b>18IDS423</b>	<b>LIFESTYLE ACCESSORIES DESIGN</b>						<b>SEMESTER-IV</b>			
<b>Marks</b>	<b>Internal</b>	<b>80</b>	<b>External</b>			<b>120</b>	<b>Total</b>	<b>200</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>0</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>6</b>	<b>Credits</b>			<b>6</b>

**COURSE OBJECTIVE:**

- To introduce students to all accessories that could be used in each and every space in design.
- To make students understand the need for aesthetics in design
- To use all above said materials in the most creative fashion that they could use.
- To help the student understand day lighting and technology of artificial lighting.
- To equip the student to understand and successfully apply lighting techniques with color effects.
- To be able to experiment new materials and to understand the properties of the materials.

**COURSE OUTCOME:**

1. Ability to decide the other factors of design which has no limitations and understand the importance of appropriate accessories to fill in the space as per design requirements.
2. Understanding the luxury element in interior design which leads to a picture perfect assimilation of items in design principles.
3. To understand the development and technology of the product and the procedure of manufacturing.
4. To be able to approach the design with the utmost importance to the function and the aesthetics to be incorporated.
5. To be able to physically make a product that faces all challenges laid for the execution and design of the same.
6. To be able to assess the working of the project and to be able to redesign with the errors to be minimized as much as possible.

**UNIT –I ROLE**

In sight of various products and lifestyle accessories in the interiors. Role of accessories in interiors. Integration of accessories in interior design. Design approaches in product and lifestyle accessories design with a focus on functionality, ergonomics, aesthetics, multiple usages etc.

**UNIT – II DEVELOPMENT AND TECHNOLOGY**

Stylistic development of decorative accessories from the past to present with insight into technological advances and the influences of social, economic and political factors on their

Design. Brief study of period room settings with the context of decorative accessories complementing the architecture and interior design.

**UNIT – III MATERIALS AND PROCESS**

Study of materials and processes adopted in accessories design. Basic understanding of construction principles, anthropometrics, principles of sizes and proportions, modeling, rapid prototyping, color, texture etc. with broad orientation to socio-cultural and historical context of the sector. Orientation to Indian as well as global context of interiors, trends and market.

**UNIT – IV DESIGN APPROACH**

Design approach with limited constraints inherent in accessory products. Evolving the strategy of design with integration of technical complexities and lifestyle influences. Development of the design of products and accessories to specific interiors and prevailing trends. Broad based approach towards innovative design and application to multi products and multi materials in manufacturing interior products and lifestyle accessories.

## **UNIT – V PROJECT**

A detailed study involving all the design aspects of any of the following lifestyle accessories: luminaire design, glassware, lighting, textiles, mirrors, clocks, wall coverings etc.

### **SUGGESTED READINGS**

1. Laura Slack, What is product Design? Roto Vision publishers, 2006
2. Treena Crochet and David Vleck, Designer's Guide to Decorative Accessories, Prentice Hall, 1st edition, 2008.
3. Michael Ashby, Kara Johnson, Materials and Design: The Art and Science of material selection in product design, Butter Worth Heinemann, 1st edition, 2002.
4. International Design Yearbook, 1995: Furniture, Lighting, Tableware, Textiles and Products, Books Nippan, 1996.
5. Karl. T. Ulrich, Steven D. Eppinger, Product Design and Development, McGraw-Hill Education Singapore; 4th edition, 2007
6. William Lidwell, Kritina Holden, Jill Butler ,Universal principles of Design, Rockport publishers, 2003.



<b>18IDT501</b>	<b>CONTEMPORARY INTERIORS</b>							<b>SEMESTER-V</b>		
<b>Marks</b>	<b>Internal</b>	<b>40</b>	<b>External</b>			<b>60</b>	<b>Total</b>	<b>100</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>3</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>0</b>	<b>Credits</b>		<b>2</b>	

**COURSE OBJECTIVE:**

- To help the student understand the designs from the industrial age to the present information age.
- To know more on the Modern Movements in Interior design from the beginnings of 20<sup>th</sup> century.
- To help students acquire knowledge of the current happenings and the classification of the importance of a particular information.
- To be understood and execute various styles like modernism, post modernism, contemporary, etc,
- To be able to understand the concepts of minimalism, and international design style.
- To be able to design a particular style of the interiors based on these understandings.

**COURSE OUTCOME:**

1. An awareness of the spread and varied later directions of modern interiors across the world.
2. An understanding of interior production from the 2060s as driven by large scale changes across the world.
3. Familiarity with contemporary forces and directions in interiors across the world.
4. To be fore thought and to be able to design for the future with an understanding of the recent history.
5. To be able to appreciate and be a critic to all works of famous architects under each movement.
6. To understand different regions and its interior design style to be able to regain global cultures understanding.

**UNIT – I EARLY PIONEERS**

Art nouveau, the post Industrial era works of Charles Renée Mackintosh, Antonio Gaudi, Gerrit Rietveld and their expressionist interior design.

**UNIT – II BAUHAUS AND POST WAR MODERNISTS**

Walter Gropius/ Bauhaus, De Stijl, Mies Van Der Rohe, Art Deco, Postwar Modernism.

**UNIT – III MODERNISM**

Interiors of LeCorbusier, Frank Lloyd Wright, Louis Khan, Kenzo Tange and Oscar Niemeyer

**UNIT – IV INTERNATIONAL STYLE**

The works of Alvar Alto, Phillip Johnson, Charles and Ray Eames, Eero Saarinen, Eero Arnio, Arne Jacobsen.

**UNIT – V POST MODERNISM AND MINIMALISM**

Interiors of Zaha Hadid, Santiago Calatrava, Frank Gehry and Peter Eisenmann.

**SUGGESTED READINGS**

1. Interior Design Course, Mary Gilliat Coyran, Octopus Ltd., London 2012
2. Interior Design & Decoration, Sherril Whiton, Prentice Hall 2006
3. Interior Design, Francis D.K. Ching, John Wiley & Sons, New York 2004
4. History of Architecture, Sir Banister Fletcher, CBS Publishers & distributors, New Delhi 1996
5. Time Saver Standards for Interior Design, Joseph De Chiara, McGraw Hill, New York. 2001

<b>18IDT502</b>	<b>INTERIOR SERVICES III – ACOUSTICS AND CLIMATE RESPONSE</b>						<b>SEMESTER-V</b>			
<b>Marks</b>	<b>Internal</b>	<b>40</b>	<b>External</b>			<b>60</b>	<b>Total</b>	<b>100</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>3</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>0</b>	<b>Credits</b>			<b>2</b>

**COURSE OBJECTIVE:**

- To understand the need and application so fair conditioning, acoustics, electrification and mechanical services in buildings with exposure to various systems, methods and fixtures.
- To understand human comfort and to be able to produce environments for human comfort.
- To be able to understand various seasons and climatic zones in the world.
- To be able to produce sustainable interiors to ensure the conservation of natural resources.
- To be able to use natural sources of energy in design and to produce the effects desired both climatically and aesthetically.
- To understand the solar energy and its various uses.

**COURSE OUTCOME:**

1. An understanding of heat balance in human beings.
2. An understanding of the effect of sun and wind in the inside of buildings.
3. An understanding of material effects inside the buildings.
4. Ability to design buildings with interiors with respect to climate.
5. To be able to modify small building elements to improve the condition of a particular climate.
6. To appreciate various methods suited for natural heating and cooling in building systems

**UNIT – I ENVIRONMENTAL CONTROL**

ENVIRONMENTAL CONTROL - Introduction – Climate and built form interaction. Global climatic factors, elements of climate, impact and issues of climatic balance in traditional and contemporary built environments, issues of ecological balance, implications of climatic forces in nature of spaces and forms. Patterns of organization and elements of built form at individual building.

**UNIT – II THERMAL COMFORT**

Thermal comfort and heat flow: Thermal comfort factors, physiological aspects. Body heat balance. Building climatologically site analysis, application of comfort diagrams.

**UNIT-III SUSTAINABLE INTERIORS**

Sustainable interiors – Meaning, methods, and types. Climatic influence and expression of the sustainable interiors. Basic calculations of thermal comfort and understanding of biodegradable materials.

**UNIT –IV SUN AND DESIGN PROCESS**

Sun and Design process – Solar charts, sun angles and shadow angles, orientation for sun, sun control, design of shading devices, radiation, glare.

**UNIT-V SOLAR ENERGY**

Solar energy and its technical applications. Climate and material choices, color and texture choices for interior spaces.

### **SUGGESTED READINGS**

1. Koeinsberger, O.H. and others, Manual of Tropical Housing and Building. Orient Longman, Chennai, 2003.
2. Konya Allan, Design for Hot Climates.2013
3. Kukreja. C.P. Tropical Architecture. Tata McGraw Hill Pub. Co. Ltd. New Delhi, 1978.
4. Markus, T.A and Morris. E.N. Buildings. Climate and Energy, Pitman Pub Ltd., London, 1980.
5. Olgay and Olgay, Solar Control and Shading Devices. 1957

18IDP511	COMPUTER GRAPHICS							SEMESTER-V		
Marks	Internal	60	External			90	Total	150	Exam Hours	3
Instruction Hours/Week	L	4	T	0	P/S	0	Credits			3

**COURSE OBJECTIVE:**

- To make them digitally strong in the design related software.
- To make them understand and realize beautiful presentations.
- Understand #D nuances related to this subject.
- To represent ideas using technology and to be update in the use of software.
- To introduce to basic features of Artificial intelligence
- To Use software that are related to to BIM
- To help the student understand the technology of computer and its terminology.
- To enable the student to understand the applications of the software and graphic system.

**COURSE OUTCOME:**

1. Ability to express using digital tools in the realm of visual composition, drafting.
2. Ability to express using digital tools 3D visualization and rendering
3. To be able to represent ideas digitally for client understanding.
4. To understand the design in 3d to ensure the elimination of design flaws when translated from 2 d
5. To understand BIM and its overall structure.
6. To induce digital drawing reading and performing capacity.
7. Ability to express using digital tools in the realm of visual composition, drafting, 3D visualization and rendering

**UNIT I INTRODUCTION TO 3DS MAX**

An overview of GUI, types of modeling, transforming objects, Compound objects, modifiers & modifier stack.

**UNIT II MODELLING TECHNIQUES**

Lathing, displacement, lofting, Boolean operations using standard and compound primitives, modeling with lofts, low polygon modeling and nurbs modeling.

**UNIT III TEXTURES AND TEXTURE MAPPING**

Using material editor, material browser, mapping textures

**UNIT IV RENDERING**

Lighting, cameras and render effects, environment mapping, fogs and atmospheres.

**UNIT V PHOTOSHOP**

Photoshop interface, creating and saving images, basic image editing, Photoshop tool box and tools, Using layers, special effects.

**SUGGESTED READINGS**

1. 3DS MAX 8 Bible – Kelly C.Murdock
2. PhotoshopCS Bible – Deke McClelland
3. Adobe Photoshop 7.0 classroom in a book – Adobe creative team
4. 3DS MAX- Advanced 3D modeling and animation–C & M, CADD Centre

<b>18IDP512</b>	<b>WORKING DRAWING AND DETAILS</b>							<b>SEMESTER-V</b>		
<b>Marks</b>	<b>Internal</b>	<b>60</b>	<b>External</b>			<b>90</b>	<b>Total</b>	<b>150</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>5</b>	<b>Credits</b>			<b>3</b>

### **COURSE OBJECTIVE:**

- Reading of working drawing, their co-relation and cross-referencing in various technical projections.
- To produce detailed measured drawings in plans, elevations, sections, detailing etc.
- To understand the various parameters involved in the detail drawing and to be able to produce the same.
- To incorporate all service drawings with respect to fire and safety, water supply and plumbing, electrical, acoustics and any such that will be accounted for.
- To be able to detail out each part into sub parts and to be able to provide construction execution details of the same.
- To be able to produce circulation patterns in the plan and to be able to detail out the standards that are used in the design.

### **COURSE OUTCOME:**

1. An understanding of all the aspects that go into the making of interiors through study of drawings related to construction.
2. Ability to resolve spatial concerns with technical aspects of a the interiors
3. Ability to design and detail components within a building interiors.
4. Ability to understand the structural components of the buildings and to be able to make changes only if necessary and hence impact studies to be carried out.
5. To understand designs in all parameters such as plans sections elevations and detailed drawings.
6. Joinery details to be detailed and produced as fit for construction.

### **UNIT – I WORKING DRAWINGS**

Preparation of working drawings – Suitable scales of drawings, methods of giving dimensions and standards on plans, sections, elevations, details etc.

### **UNIT – II PLANS**

Preparation of plans – Architectural plans, furniture layout floor plans with clearances, different level floor plans, and detailed floor plans of each room.

### **UNIT – III ELEVATIONS AND SECTIONS**

Elevations and Sections – Detailed sectional elevations of all the walls in the interior with al the required dimensions and specifications.

### **UNIT - IV SERVICES**

Details of all services – layouts for flooring, ceiling, electrical, plumbing, lighting, fire fighting etc., toilet details, kitchen details, staircase details, furniture details, Interior finishing details, material, color and texture details,

Fixture and fixing and joinery details.

## **UNIT – V SPECIFICATIONS WRITING**

Specifications writing: Writing detailed clause by clause specifications for materials pre and post execution, tests, mode of measurements, manufacturer's details and specifications etc.

Manufacturer's specifications – Database of manufacturers specifications for the following materials based on surveys –

Glass, plywood and laminates, hardware, electrical, wiring, accessories, plumbing fitting and fixtures, flooring, cladding etc.,

Note: Students shall prepare at least two working drawing sets, one for a small residence and one for a large building.

### **SUGGESTED READINGS**

1. Leibing. W. Ralph, Architectural Working Drawings, 4th edition, John wiley and sons, New York, 1999.
2. Macey. W. Frank, Specification in detail, 5th edition, Technical press ltd, London, 1955.
3. Shah, M.G.; and others, Building Drawing: An integrated approach to build environment, 3rd ed, Tata McGraw Hill Pub. Co. Ltd, New Delhi, 1996.
4. Fredd Stitt, Working Drawing Manual, McGraw-Hill Professional; 1st edition, 1998.
5. Kilmer, Working Drawings and Details for Interiors, John Wiley and Son 2009

<b>18IDS521</b>	<b>INTERIOR DESIGN - V</b>							<b>SEMESTER-V</b>		
<b>Marks</b>	<b>Internal</b>	<b>160</b>	<b>External</b>			<b>240</b>	<b>Total</b>	<b>400</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>0</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>12</b>	<b>Credits</b>		<b>8</b>	

**COURSE OBJECTIVE:**

- Space planning process (block diagram, concept statement)
- Furniture
- Historic style
- Structural integration
- Material selection
- Color
- Rendering
- Design Process/methodology
- Creativity /originality
- Documenting space (sketch and photo documentation)
- Anthropometry and ergonomics
- Graphic design (page layout and composition)
- Concepts sketching
- Application of design principles and elements
- Portfolio development
- To create understanding of human built environment as a holistic, living entity from macro to micro scales,
- shaped by geographic and socio-cultural forces as well as by historic, political and economic factors, through study of and design within the context of rural settlements.
- To enable a comprehensive study of rural settlement and Interior design in order to understand them as exemplar of collective design that evolved through various parameters.
- To observe changes in the above, analyze their nature and causes for them

**COURSE OUTCOME:**

1. Ability to collect, assimilate and integrate knowledge in a holistic manner.
2. Sensitivity towards the nature and values of unselfconscious and collective design as well as the interconnectedness of human society and environment
3. Ability to observe and analyze changes in the above.
4. Ability to project future transformations and give possible/ appropriate ways to address issues, if any
5. Ability to collect, assimilate and integrate knowledge in a holistic manner.
6. Sensitivity towards the nature and values of unselfconscious and collective design as well as the interconnectedness of human society and environment
7. Ability to observe and analyze changes in the above.
8. Development of required skills – observation / analysis / abstractions / interpretation / representations / expressions through models and drawings.
9. To analyze the pre data of the concepts and to introduce design solutions using a creative approach.
10. To be able to describe an understanding that is both in representation and verbally present the same.
11. To update and to introduce various other methodologies to enhance the skill set.
12. The students shall understand the basic functional aspect of designing simple building type and its relevant spatial organization.

13. The students shall be learn to reciprocate and sensitize the design/concept to the environment and the design skill of the project

The primary focus should be on –

- Introduction to building codes
- Way finding, Signage and graphics
- Universal Design
- Accessible design
- Design Disabled
- Materials, furniture and finish selections
- Introduction to construction detailing
- Ergonomics and Human Factors
- Digital representation ( 3 D modeling)
- Space planning process
- Color
- Interior environmental control issues
- Rendering
- The list of suggested topics to be covered as design problems:
- Institutional spaces in urban, semi-urban and rural contexts with an aim to explore and understand transformation and adaptive re-use.
- Historic and abandoned sites provide scope for rejuvenation through multi dimensional programs covering functions like museums, cultural and resource centers, libraries, convention centers, exhibitions etc. that also aim in making a social contribution.
- Recreational spaces such as auditoriums, halls, cinema houses, stage design etc. Knowledge of audio visual communication, color and light interaction, sound control system, design of interior elements, products and furniture forms.

Design issues in addition to the primary focus for the above are statement of institution character through interior environment responses to site and context, integration of interior architectural

Elements to other interior elements, dialogue between the existing and the newly added insert, interpretation of institutional activities and their spatial correlation.

**Note:** At least two major exercises and two minor design/time problems should be given. In the end exam, which is a viva-voce the students have to present the entire semester work for assessment.

### **SUGGESTED READINGS**

1. Karlen Mark, Space planning Basics, Van Nostrand Reinhold, New York, 1992.
2. Joseph D Chiara, Julius Panero, & Martin Zelnick, Time Saver standards for Interior Design & space planning, 2nd edition, Mc-Graw Hill professional, 2001.
3. Francis.D. Ching & Corky Bingelli, Interior Design Illustrated, 2nd edition, Wiley publishers, 2004.
4. Julius Panero & Martin Zelnick, Human Dimension & Interior Space : A source book of Design Reference standards, Watson – Guptill, 1979.
5. Maureen Mitton, Interior Design Visual Presentation: A Guide to Graphics, Models, and Presentation Techniques. John Wiley and Sons, 2003
6. Mark.W. Lin, Drawing and Designing with Confidence: A step-by-step guide, Wiley and Sons, 1993.



7. Robert Rengel, *Shaping Interior Space*, Fairchild Books & Visuals, 2002
8. Neufert Ernest, *Architect's Data*, Granada pub. Ltd. London, 2000.
9. Maryrose McGowan & Kelsey Kruse, *Interior Graphic Standards*, Wiley and sons, 2004.
10. Robert F. Erlandson, *Universal and Accessible Design for Products, Services, and Processes*, CRC; 1st edition, 2007.
11. Oliver Herwig & L. Bruce, *Universal Design: Solutions for Barrier-free*, Birkhäuser Basel; 1st edition, 2008

18IDS524	ESTIMATION COSTING							SEMESTER-V		
Marks	Internal	60	External			90	Total	150	Exam Hours	3
Instruction Hours/Week	L	1	T	0	P/S	5	Credits			3

### COURSE OBJECTIVE:

- To equip the students to prepare the Estimate in order to fore see the cost of the work
- To implement an interior design project & also to monitor / control project cost.
- To be able to make specification of the materials used and hence regulate the cost to keep it in the budget specified by the client.
- To understand various finishes and its rates to be executed as per the budget and the designers choice.
- To be able to provide a rough estimate and a detailed estimate as in need of the project.
- To be able to learn to control the cost and time with respect to the project.

### COURSE OUTCOME:

1. Ability to understand and write specification for the construction projects
2. Ability to do estimate of building interiors with various quantities
3. To be update about the latest materials available in the market ad to be able to substitute materials to attain cost goals.
4. To understand the various methods of estimation that can be made and to be able to use the same during the execution of the project.
5. To have the knowledge of the budget limits of the client and hence will be able to make suitable suggestions to the client.
6. To be able to alter the specification and to adjust the final cost though the changes.

### UNIT – I INTRODUCTION TO ESTIMATION

Estimation –definition, purpose, types of estimate, and procedure for estimating the cost of work in order to implement an interior design project or to make products related to interior design like furniture, Artifacts etc.

### UNIT – II RATE ANALYSIS & ESTIMATION FORMAT

Rate Analysis – definition, method of preparation , quantity & labor estimate for wood work, steelwork, Aluminum work, glass & its rate for different , thickness & sections, finishing (enamelpaint,ducopaints, Melamine, DUcoats, Hand polishing, veneering and laminating) forwalls & ceilings. Electrical & plumbing products, wiring, ducting etc., and laying of tiles &wall paneling in the estimate format of the project.

### UNIT – III DETAILED ESTIMATE

Detailed Estimate–data required factors to be considered, methodology of preparation, abstract of Estimate, contingencies, labor charges, bill of quantities, different methods of estimate for interior design works, methods of measurement of works.

### UNIT – IV COSTING OFFIXTURES & FITTINGS

Cost of the following items : electrical fitting like , luminaries , fan , cables , switches , etc . , tiles in skirting & dado , cement plaster , joinery in wood , steel & aluminum , painting to walls – cement paint, oil paints, Distemper acrylic emulsion, enamel paint painting to joinery, varnishing, and French polishing plumbing. Equipments like piping , shower panels , cubicles , tubs , Jacuzzis , taps , motors , fountains , false ceiling of Aluminum panels , steel & wooden frame work , thermocol etc .wall paneling of ceramic tiles & other tiles of materials suitable for the same, partitions made of materials like aluminum wood, steel etc

### UNIT – V INTRODUCTIONTO SPECIFICATION

Specification – Definition, purpose, procedure for writing specification forth purpose of calling tenders, types of specification. Specification for different item related to interior design project–wood work for Furniture window frames & pelmets, partition set also of materials like steel aluminum glass of various kind. Wall paneling & false ceiling of materials like aluminum, steel, wood, electrical, plumbing, air-conditioning & fire fighting equipments.

## **SUGGESTED READINGS**

1. M. Chakraborti, .Estimation, Costing, Specification and Valuation in Civil engineering. 1992
2. Dutta, Estimating and Costing, S. Dutta and Co., Luck now 1983
1. S. C. Rang wala, Elements of Estimating and costing, Charoter publishing House,Anand, India, 1984.
2. The interior designers guide: to pricing, estimating budgeting. By Theo Susan 2000

18IDE531A	SIGNAGE AND GRAPHICS (ELECTIVE II)						SEMESTER-V			
Marks	Internal	60	External			90	Total	150	Exam Hours	3
Instruction Hours/Week	L	1	T	0	P/S	5	Credits		3	

#### **COURSE OBJECTIVE:**

- Knowledge about the various styles of signage manufactured in various materials is vital to an designer.
- Understanding the methods and techniques involved in signage and graphics.
- Understanding the signage location and using apt design and material is important.
- To understand the visibility factor and the importance of the signage.
- To be able to differentiate the various types of signage and to se it aptly in strategic locations.
- As a designer it is important to come up with unique and legible ideas for signage.

#### **COURSE OUTCOME:**

1. Ability to design products in signage using graphics.
2. Ability to understand the needs of the industry and give better products in design
3. Ability to experiment with different materials
4. Ability to provide proper lighting for the signage to be legible.
5. Ability to produce signage for large spaces and to be unique in design
6. To be able to understand the hardware system and to be integrated to the project in total

#### **UNIT – I INTRODUCTION**

Introduction – environmental graphic Design, way finding, Need, importance etc.

#### **UNIT – II DEFINITION**

Information content system – kinds of sign information, hierarchy of content, developing the sign information content, Navigation – message hierarchy and proximity, Other factors affecting sign information content, pictorial information content, signage master plans.

#### **UNIT – III THE GRAPHIC SYSTEM**

The Graphic system - Typography overview, choosing a typeface, typographic treatment, typographic considerations in signage for no sighted and low sighted people, symbols and arrows, other graphic elements, color, layout, overview of signage graphic process.

#### **UNIT – IV THE HARDWARE SYSTEM**

The hardware system – shape, connotations of form, sign mounting considerations, sign size considerations, sign lighting overview, sign materials overview, basic sign materials, electronic message displays, stock sign hardware systems, sign materials and codes, overview of coatings and finishes applied to signs.

#### **UNIT – V SIGNAGE DESIGN**

Signage Design – Eyelevel, light, Fonts, typographical systems and type area, pictograms, arrows, color – contrast, language, systems, tones, Coding, privacy and protection, Room identification.

#### **UNIT – VI SIGNAGE PLANNING**

Signage Planning – contract, obtaining information, preliminary design, design, construction, work plan and prototypes, tenders, specifications, on-site management, completion.

## **SUGGESTED READINGS**

1. Joseph DeChiara, Julius Panero, and Martin Zelnik Time-Saver Standards for Interior Design and Space Planning, 2nd edition, Mc-Graw Hill Professional,2001.
2. Andreas Uebele, Signage Systems and Information Graphics , Thames and Hudson, 2007
3. Craig Berger, Wayfinding: Designing and Implementing Graphic Navigational Systems, Rotovision, 2009.
4. Chris Calori, Signage and Wayfinding Design: A Complete Guide to Creating Environmental Graphic Design Systems, Wiley and sons, 2007.
5. David Gibson, The Wayfinding Handbook: Information Design for Public Places, Princeton Architectural Press; 1st edition, 2009.
6. Rayan Abdullah and Roger Hubner, Pictograms, Icons and Signs, Thames and Hudson, illustrated edition, 2006.

<b>18IDES531B</b>	<b>PRODUCT DESIGN (ELECTIVE II)</b>							<b>SEMESTER-V</b>		
<b>Marks</b>	<b>Internal</b>	<b>60</b>	<b>External</b>			<b>90</b>	<b>Total</b>	<b>150</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>		<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>5</b>	<b>Credits</b>		<b>3</b>

**COURSE OBJECTIVE:**

- Knowledge about the various styles of furniture manufactured in various materials is vital to a Designer.
- Understanding the methods and techniques involved in furniture and product design.
- To understand the importance of a digital product and then to create a digital product.
- The process involved in the design of a product to be understood.
- To understand the detailing of the furniture and its feasibility for production
- To understand mass production techniques and the production line formation of the same.

**COURSE OUTCOME:**

1. Ability to design products
2. Ability to understand the needs of the industry and give better product design.
3. To understand the need and to be able to justify the product to be designed.
4. To follow design procedure and to understand the process to make a product.
5. To understand various materials and to execute the best possible material for a particular design.
6. To create a digital product and to be able to display the product details of the same

**UNIT – I INTRODUCTION**

An brief introduction to Product Designing – Various elements – History of Product Design – Definition of Product Design, understanding of Product Design - Purpose of Product Design – Role of Product Designers.

**UNITY – II HUMANFACTORS**

Definition of human factors, Application of human factors data. Human activities, their nature and effects. Man-machine system and physical environment. Human performance and system reliability. Information input and processing. Human control systems. Applied anthropometry – Human response to Climate.

**UNIT – III ASPECTSOFPRODUCTDESIGN**

Visual, Auditory, Tactual, Olfactory human mechanisms, Physical space and arrangement. Visual display, process of seeing, visual discrimination, quantitative and qualitative visual display, Alphanumeric and related displays, Visual codes and symbols.

**UNIT – IV PRODUCTDESIGN**

Form, Colour, Symbols, User specific criteria, Material, Technology and recyclability, Packaging. Multiple Utility oriented approach to Product Design.

**UNIT V DESIGN EXERCISES**

Design of Household elements, tools and devices – Spoon/Cutlery.  
 Design of furniture – Chairs/Computer table, Kitchen racks, Cabinets etc.  
 Design of Industrial Product – Watch Dial, Gear Wheels, Automobile Headlights etc.  
 Element design for the physically and mentally different people.

**SUGGESTED READINGS**

1. Time Saver Standards for Interior Design 2001
2. Andrew Alpern, Handbook of Specialty Elements in Architecture, McGraw-Hill Co., USA, 1982.
3. Francis D.K.Ching, Interior Design Illustrated, VNR Publications, New York, 1987.
4. An invitation to Design, Helen Marie Evans. 2001

18IDES531C	SET DESIGN (ELECTIVE II)							SEMESTER-II		
Marks	Internal	60	External			90	Total	150	Exam Hours	3
Instruction Hours/Week	L	1	T	0	P/S	5	Credits		3	

#### **COURSE OBJECTIVE:**

- Knowledge about the various styles of sets manufactured in various materials is vital to an designer for a foray into the film industry.
- Understanding the methods and techniques involved in set designs.
- To understand the defiance of temporary structures.
- To acquire knowledge of materials and construction techniques used in temporary structures.
- To understand the area and field specific for the film industry.
- To be able to design and imagine various backgrounds for the set design

#### **COURSE OUTCOME:**

1. Ability to design products and sets suitable to situations in concern
2. Ability to understand the needs of the industry and give better product in design
3. The student will be able to enter into the film industry in the foray of Design
4. The student will acquire knowledge various temporary structural methods.
5. To understand to set up stage and platforms for future
6. To understand history and security in the film industry and to be able to use the techniques already introduced
7. To understand theater sit up and the rolling screen design.

#### **UNIT-I FILM AND SOCIETY**

Examination of the twentieth-century culture and society through film. Critical analysis of cultural and social conflicts are portrayed and worked out in popular films, and examination of how motion pictures create a window into modern society. Film as cultural texts to better understand history and culture manifestations.

#### **UNIT-I HISTORY AND THEATER FILM SET DESIGN**

Investigation the production methods, dramatic theory and conventions, and scene design of various performance media since the popularization of the motion picture, and how it has influenced all entertainment design in the 20th and 21st centuries.

#### **UNIT-III GRAPHIC DESIGN AND TYPOGRAPHY FOR EXHIBIT DESIGN**

Principles of layout for creating effective visual signage and explore the unique problems, technique, theory, and approaches of signage in film, theatre, and other forms of mediated exhibition. Introduction to the design applications for building signage.

#### **UNIT-IV SET DESIGN AND CONCEPT WRAP**

Introduction to the basic concepts, through theory and practice, of scene design in theatre, film, and other fine arts and entertainment media. Students will learn how to analyze scripts for proper scenery, how to conceptualize designs that will translate into actual sets, and develop visual thinking within the creative process.

#### **UNIT-V STAGE DESIGN**

Stage design process from inception to performance, script analysis, visual arts analysis, research skills, and the application of principles and elements of design. Understanding stage setting through language, color, and architectural analysis.

#### **SUGGESTED READINGS**

1. Time saver standards for building types, DeChiara and Callender, Mc Graw hill company 2001
2. Neufert Architect's data, Bousmaha Baiche & Nicholas Walliman, Blackwell science ltd 2002



18IDP611	PRACTICAL TRAINING							SEMESTER-VI		
Marks	Internal	320	External			480	Total	800	Exam Hours	3
Instruction Hours/Week	L	0	T	0	P/S	0	Credits		16	

#### COURSE OBJECTIVE:

- To introduce the challenges of interior design practice.
- To enable overall understanding of different stages in real life interior design projects in practice.
- To create involvement in these stages as much as possible within the scope of a specific interior design practice –
  - initiation of project,
  - development of concepts into schematic drawings,
  - approval process,
  - presentations and working drawings,
  - involvement in office discussions and client meetings,
  - integrating structural and service concerns,
  - estimation and tendering processes,
  - site supervision and coordination in the construction process

#### COURSE OUTCOME:

1. An overall idea of the nuances of interior design practice.
2. An understanding about the total process that goes into the making of an interior in a building.
3. Maturity in using the experience gained from internship in the thesis project.
4. To have the ability to handle clients and translate the design requirements in to design projects.
5. To be able to experience hands on experience in the site during site visits and gain practical knowledge.
6. To be able to do professional detailing and to be able to produce drawings that are good for construction.

Every student must work in an interior designer's office as a full time trainee for a period of 20 calendar weeks (excluding viva – voce) from the date of commencement of training. The chief Interior Designer in the firm should have a minimum of 5 years of practical/ professional experience after his /her graduation.

The student should involve herself /himself in various aspects of work in an office like working drawings, presentation drawings, quantity estimation, site supervision etc.

Students should understand professional practice methods of various interior designers, design process from client contacts to production documents, tender documents, production drawings for various works, site supervision etc.

For various works. They should also know the Coordination of various agencies – client, members of design team, consultants, contractors, craftsmen and construction supervisors.

Detailed instructions regarding the training, the frequency of reporting to the department etc will be issued at the end of Seventh semester, which the student must strictly follow.

After completion of training, every student will have to submit a detailed report with a set of drawings on at least two projects in which he / she has worked during the twenty calendar weeks of the practical training period.

This report will be evaluated at viva – voce by a jury consisting of one external, one internal and head of the department or his nominee. After submission of the report the department at its convenience will arrange for the conduct of the viva – voce examination.

<b>18IDS621</b>	<b>FIELD STUDY AND DOCUMENTATION</b>						<b>SEMESTER-VI</b>			
<b>Marks</b>	<b>Internal</b>	<b>60</b>	<b>External</b>			<b>90</b>	<b>Total</b>	<b>150</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>0</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>6</b>	<b>Credits</b>		<b>3</b>	

The choice of the building shall be Contemporary, Heritage, Vernacular or even a settlement/small area in the city of training. This field study and documentation shall be submitted in the form of an architectural report with sketches, pictures and drawings and presented in the form of videos, presentation, slideshow etc covering the following aspects:

- History and Cultural Impact
- Style and Function
- Form and Spatial Studies
- Key Elements and Features
- Materials and Technology

<b>18IDT701</b>	<b>PROFESSIONAL PRACTICE</b>						<b>SEMESTER-VII</b>			
<b>Marks</b>	<b>Internal</b>	<b>40</b>	<b>External</b>			<b>60</b>	<b>Total</b>	<b>100</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>3</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>0</b>	<b>Credits</b>			<b>2</b>

### **COURSE OBJECTIVES:**

- To develop understanding of the duties and liabilities of an Interior designer
- To obtain knowledge of bye-laws that relate to the building & the environment in the Indian context.
- To learn and understand the Professional ethics and practice.
- To understand the code of conduct for interior Designers.
- To understand and undertake duties of an interior designer.
- To enable students to be ready for the professional world as practicing interior designers.

### **COURSE OUTCOME:**

1. Ability to understand the professional standards
2. Ability to understand the tender documents and contract
3. Ability to understand and abide the duties of an interior designer.
4. Ability to understand and execute the code of conduct for an interior designer.
5. Ability to tender for Government projects and be able to estimate the cost of the same.
6. Ability to conduct various valuation for interior projects.

### **UNIT – I ROLE OF INTERIOR DESIGNER**

Role of Interior Designer in society: Interior Design Profession as compared to other professions. Difference between profession and business. IIID and other organizations related to interior design profession. Interior Designers approach to works, ways of getting works: types of works, works partly executed by other Interior Designers. : Various precautions to be taken before taking up the work, conditions of engagement between interior Designer and client: commencement of work.

### **UNIT – II PROFESSIONAL PRACTICE**

Issues of professional practice: Professional behavior, Ethics, Types of clients, Contracts, Tenders, Arbitration etc. as defined in terms of Interior Design field and current day context. Career opportunities, styles of interior design practice, relationship between client and professional, type of fees, process of fees negotiations, billing methods, tax liabilities, contracts – types of contracts – item rate, labour, lump sum, cost plus percentage etc.

### **UNIT – III DUTIES**

Interior Designer's duties: drawings to be prepared: Interior Designer's relation with other parties connected with works such as client, contractor, sub contractors, consultants and authorities.

### **UNIT – IV CODES OF CONDUCT**

IIID Code of professional conduct: scale of charges: units and mode of measurements, clerk of work and his duties, inspection of work, certificate of payment to contractor, bill of quantities, schedule of rates, tenders, public, limited and negotiated tender documents and allied formalities. Preliminary knowledge of Consumer protection Act and other related acts on Interior Designers.

### **UNIT – V CODES OF CORRESPONDENCE**

Types of offices for interior design practice: staff structure, filing of records, correspondence and drawings, maintenance of accounts, presentations in meetings, recording minutes of meeting.

**Note:** a report to be prepared by each student after visiting an interior designer's office.  
Knowledge of role of consultants and coordination between different consultants on a big project.  
Codes of fire safety, lighting, ventilation, electrical layout and barrier free environment

#### **SUGGESTED READINGS**

1. Indian Institute of Architects. H.B. Professional Practice, The Architects pub. Bombay. 2017
2. Namavati. H. Roshan. Professional Practice. 8th ed, Lakshani Book Depot, Bombay, 2001.
3. Christine .M. Piotrowski , Professional practice for Interior Designers, 3rd edition, Wiley and sons, 2001.
4. Cindy Coleman, Interior Design Handbook practice, Mc Graw Hill professional, ist ed, 2001
5. Ronald Vetch, Professional practice for Interior Designers, Peguis Publishers, Limited, 1987.

<b>18IDT702</b>	<b>PROJECT MANAGEMENT</b>							<b>SEMESTER-VII</b>		
<b>Marks</b>	<b>Internal</b>	<b>40</b>	<b>External</b>			<b>60</b>	<b>Total</b>	<b>100</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>3</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>0</b>	<b>Credits</b>			<b>2</b>

**COURSE OBJECTIVE:**

- To introduce different management techniques suitable for planning and construction projects.
- To enable understanding of management systems for accomplishing the task efficiently in terms of quality, time and cost.
- To understand the elements of network and be able to take the project completion analysis.
- To understand various methods for the analysis and hence arrive at the management procedures.
- To handle and calculate risk in delays and hence suggesting corrections to beat time lag in projects.
- To update project in the process and be able to control manpower management.

**COURSE OUTCOME:**

1. Ability to understand a project from concept to commissioning, feasibility study & facility programme, design, construction to commissioning.
2. Ability to apply project management techniques in achieving objectives of a project like client needs, quality, time & cost.
3. An understanding of principles of management, construction scheduling, scope definition and team roles
4. To differentiate the management into time, labor, ad materials mainly apart from other contingencies.
5. To allocate various job works to different vendors and vendor management

To enable the smooth functioning of the project and to move towards completion in time

**UNIT – I INTRODUCTION**

Project planning and project scheduling and project controlling, Role of Decision in project management, Method of planning and programming, Human aspects of project management, work breakdown structure, Life cycle of a project, disadvantages of traditional management system

**UNIT – II ELEMENTS OF NETWORK**

Event, activity, dummy, network rules, graphical guidelines for network, numbering of events

**UNIT – III CRITICAL PATH METHOD AND PERT ANALYSIS**

CPM network analysis & PERT time estimates, time computation & network analysis

**UNIT – IV PROJECT TIME REDUCTION AND OPTIMIZATION**

Project cost, Indirect project cost, direct project cost, slope of the direct cost curve, total project cost and Optimum duration, contracting the network for cost optimization, steps in cost-time optimization

**UNIT – V PROJECT UPDATING AND ALLOCATION**

When to update? Data required for updating, steps in the process of updating  
Resource usage profile: Histogram, Resource smoothing and Resource leveling, Computer applications in project management.

**SUGGESTED READINGS**

1. Dr. B.C.Punmia et al. Project planning and control with PERT and CPM, Laxmi Publications, 2002
2. 1.JeromeD.WiestandFerdinandK.Levy,AManagementGuidetoPERT,CPM,prenticeHallofIndia Pub, Ltd., New Delhi, 1982
3. 2.R.A.BurgessandG.White,BuildingproductionandprojectManagement,Theconstructionpress, London, 1997

<b>18IDP711</b>	<b>INTERIOR PHOTOGRAPHY AND JOURNALISM</b>						<b>SEMESTER-VII</b>			
<b>Marks</b>	<b>Internal</b>	<b>60</b>	<b>External</b>			<b>90</b>	<b>Total</b>	<b>150</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>4</b>	<b>Credits</b>			<b>3</b>

### **COURSE OBJECTIVES:**

- To help the student understand the principles and technology of photography.
- To enable the student to understand the applications of photographs in interior
- To enable students to learn and understand the methods for blogging and vlogging
- To build the ability in students to create a website and be able to host it as well.
- To enable students to be updated and also to bring the interest of technology into the work.
- To ensure the student understands the various aspect od composition lighting , color
- And integration of all these aspects into one project.
- To understand and acquire knowledge in interior journalism, Documentation and analysis of works.

### **COURSE OUTCOME:**

1. To develop a keen eye for compositions through photography.
2. To admire and capture the essence of aesthetics in Interior design projects.
3. To appreciate the various compositions in the nature and in natural elements.
4. To understand of the play in interiors through various interior lighting ideas.
5. To understand and apply color theory through color wheel and color psychology.
6. To be able to integrate all aspects of design in the process.
7. To develop a keen eye for compositions through photography.
8. To admire and capture the essence of aesthetics in Interior design projects.
9. To be able to deliver and write in adapt the design language to explain the nuances of the design through journalism.
10. To be able to choose the stream of interior journalism as an alternative career path in Interior Design

### **UNIT-1PHOTOGRAPHY & TECHNIQUES**

Concept of color; concepts of lighting, distance, visual angle, frames; media; Types of camera, properties and priorities; Exposure, Aperture, Speed; Photographic films. Techniques of photography relevant to interior

### **UNIT-2 JOURNALISM**

Analysis of recent historical and contemporary examples of written and journalistic criticism of interior, including selected writings by Indian and overseas critics; discursive techniques, analysis of major critical themes, thematic categories in interior writing over the past three centuries.

### **UNIT-3 ANALYSIS OF WORKS**

Works of Indian and international writers and critics will be presented and discussed. Seminars on Indian interior design writers, journalists and critics

### **UNIT-4 FIELD PROGRAM**

Exercise on integrating photography in interior journalism.

### **UNIT-5 DOCUMENTING AND REPORTING**

Preparation of documentaries and reports in any media such as Video, Still images, Reports, presentations etc., and present as a Seminar.

## **REFERENCES**

1. Dave Sounders, Professional Advertising Photography, Merchurst, London 1988
2. Roger Hicks, Practical photography, Cassell, London 1996
3. Julian Calder and John Garrett, The 35mm Photographer's Handbook, Pan Books, London 1999
4. Julie Adair King, Digital Photography for Dummies, COMDEX, New Delhi 1998

<b>18IDP712</b>	<b>ADVANCED WORKSHOP</b>						<b>SEMESTER-VII</b>			
<b>Marks</b>	<b>Internal</b>	<b>80</b>	<b>External</b>			<b>120</b>	<b>Total</b>	<b>200</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>6</b>	<b>Credits</b>		<b>4</b>	

**COURSE OBJECTIVE:**

- To understand the basic methods of furniture making with focus on hands
- on methods regarding workshop practices in wood, metal, plastic, textiles etc. to understand the usage of various materials as required with its properties.
- To understand the usage of engineered wood against the solid wood.
- To understand the fixing details of multiple materials and its interaction with each other.
- To be introduced to alternate materials
- To relate the various capacities into creative pursuits of design.
- To understand and acquire knowledge in interior workshops for hands on experience in build and construct design processes.

**COURSE OUTCOME:**

1. Understanding the scale of drawing to life size
2. To use tools related to wood glass and alternative substitution to wood.
3. To understand properties and usage of materials henceforth.
4. To understand modular furniture through engineered wood.
5. To understand the various capacities of hardware for the various materials.
6. To understand wood joints and its usage in various circumstances.
7. To develop a keen eye for compositions through workshops.
8. To use all materials in coordination with other materials and create an understanding of multi material compositions.

**UNIT – I DEVELOPMENT**

Development of textile design in different cultures from primitive art to contemporary designs. Criteria of design of the elements and principles of textile design. Analysis of a motif, developing repeat as a basic unit of design in textile printing.

**UNIT – II BLOCK PRINTING**

Block printing – developing block, understanding the material used, colors, types and their mixing process, various color printing.

**UNIT – III SCREEN PRINTING**

Screen printing – design evolution for wall hangings, preparing screen and understanding the technique, printing on paper and printing on fabric.

**SUGGESTED READINGS**

1. June Fish, Designing and printing textiles, Crowood press, 2005
2. R.W.Lee, Printing on Textiles by Direct and Transfer Techniques, Noyes Data Corporation, 1981
3. Fabrics: A guide for architects and Interior Designers, Marypaul Yates, Norton publishers, 2002.
4. Materials for Interior Environments, Corky Bingelli, John wiley and sons, 2007



<b>18IDS721</b>	<b>INTERIOR DESIGN - VI</b>						<b>SEMESTER-VII</b>			
<b>Marks</b>	<b>Internal</b>	<b>160</b>	<b>External</b>			<b>240</b>	<b>Total</b>	<b>400</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>2</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>10</b>	<b>Credits</b>		<b>8</b>	

**COURSE OBJECTIVE:**

- To create understanding of human built environment as a holistic, living entity from macro to micro scales,
- shaped by geographic and socio-cultural forces as well as by historic, political and economic factors, through study of and design within the context of rural settlements.
- To enable a comprehensive study of rural settlement and Interior design in order to understand them as exemplar of collective design that evolved through various parameters.
- To observe changes in the above, analyze their nature and causes for them
- Understanding a Design Programme and the Components of the Design Problem.
- To introduce buildings as consumers of resources for human needs and to enable responsible, creative addressing of this fact through design choices.
- To enable an understanding of interior design as integrating diverse functional concerns in a building through analysis and innovation.

**COURSE OUTCOME:**

1. Ability to collect, assimilate and integrate knowledge in a holistic manner.
2. Sensitivity towards the nature and values of unselfconscious and collective design as well as the interconnectedness of human society and environment
3. Ability to observe and analyze changes in the above.
4. Ability to project future transformations and give possible/ appropriate ways to address issues, if any
5. Ability to collect, assimilate and integrate knowledge in a holistic manner.
6. Sensitivity towards the nature and values of unselfconscious and collective design as well as the interconnectedness of human society and environment.
7. Understanding a Design Programme and the Components of the Design Problem.
8. To introduce buildings as consumers of resources for human needs and to enable responsible, creative addressing of this fact through design choices.
9. To enable an understanding of interior design as integrating diverse functional concerns in a building through analysis and innovation.
10. Ability to critically understand and address issue of resources.
11. Ability to balance diverse aspects/concerns of buildings by making informed choices and innovative design in the context of buildings with intense or complex programmes.
12. Ability to apply knowledge intensively in realms such as sustainable built environment, services

**COURSE**

- Interior Construction Detailing
- Way finding/signage and graphic identification
- Decorative Accessories
- Building Codes.
- Rendering (hand and computer generated).
- Custom designed furniture and cabinetry
- Specification Writing

- Cost estimating
- Selection of sustainable/green materials
- The list of suggested topics to be covered as design problems:
- Hospitality Design, Retail Design, Healthcare Design and Office systems
- Urban Interiors – Shopping malls, streets, Town squares, Fair grounds
- Interior Ports – air ports, Bus stops, Railway stations, boats/ports
- Exhibition displays – urban level and National level.
- Mobile units – buses, cars, railway coaches etc.

Note: One major design in detail and two minor design/time problems should be given.

### **SUGGESTED READINGS**

1. Karlen Mark, Space planning Basics, Van Nostrand Reinhold, New York, 1992.
2. Joseph D Chiara, Julius Panero, & Martin Zelnick, Time Saver standards for Interior Design & space planning, 2nd edition, Mc-Graw Hill professional, 2001.
3. Francis.D. Ching & Corky Bingelli, Interior Design Illustrated, 2nd edition, Wiley publishers, 2004.
4. Julius Panero & Martin Zelnick, Human Dimension & Interior Space : A source book of Design Reference standards, Watson – Guphill, 1979.
5. Maureen Mitton, Interior Design Visual Presentation: A Guide to Graphics, Models, and Presentation Techniques. John Wiley and Sons, 2003
6. Mark.W. Lin, Drawing and Designing with Confidence: A step-by-step guide, Wiley and Sons, 1993.
7. Robert Rengel, Shaping Interior Space, Fairchild Books & Visuals, 2002
8. Neufert Ernest, Architect's Data, Granada pub. Ltd. London, 2000.
9. Maryrose McGowan & Kelsey Kruse, Interior Graphic Standards, Wiley and sons, 2004.
10. Mary Jo Peterson, Universal Kitchen and Bathroom Planning: Design That Adapts to People, McGraw-Hill Professional Publishing, 1998.
11. David Kent Ballast, Interior Construction & Detailing for Designers and Architects, Professional Publications, Inc.; Fourth Edition, 2007.

18IDS722	INTEGRATED PROJECT WORK							SEMESTER-VII		
Marks	Internal	60	External			90	Total	150	Exam Hours	3
Instruction Hours/Week	L	1	T	0	P/S	6	Credits		3	

#### COURSE OBJECTIVE:

- The student has to submit a project feasibility report on the project done in the design studio by integrating the knowledge and skills acquired from all the subjects studied till date.
- The student has to exhibit the capacities of an interior design in full ideology and should be ready for the professional challenges in future.
- The project understanding in totality will be expected from each student.
- It will help understand the importance of each subject in the previous years and its applications henceforth
- To understand the environmental impact assessment and to analyze the feasibility of the project in any given site.
- To check the feasibility of the project in the services.

#### COURSE OUTCOME:

1. Ability to integrate all the knowledge acquired so far and to exhibit the same through drawings and renderings.
2. Ability to integrate all aspects of the project to give a final report.
3. To be ready for large scale projects before the thesis.
4. To conduct research and to present the research with analysis of the feasibility of the project.
5. To understand the socio economic implication of the project in the given location.
6. To check the technical feasibility of eth project with parameters such as soil, water and other natural elements.
7. To assess the building for seismic zone and hence design according to the reading and understanding.

The report may consist of the following -

- Environmental impact assessment of the project following the standards and specifications
- Socio-economic appraisal of the project and the design considering factors such as behavioral aspects, security considerations, costs for different user groups, aesthetic preferences etc.
- Technical feasibility – through execution and detailing of different spaces and elements of design, checking the feasibility of layout for service systems and specifications
- Costing of the project – bill of quantities, schedule of rates, specifications etc. economic viability and financial viability
- Space planning aspects/ issues – user activity spaces, access to physically challenged, fire safety, other services, green rating etc.

Note : The report has to presented for internal assessment

## **SUGGESTED READINGS**

1. M.P. Birkett, An appraisal of project work as an educational tool within interior design education at tertiary level and its relation to professional practice, Royal College of Art, 1985.
2. Griff Boyle, Design Project Management, Ashgate Publishing; illustrated edition, 2003.

<b>18IDPE731A</b>	<b>INTERIOR WEBSITE AND BLOGGING</b>						<b>SEMESTER-VII</b>			
<b>Marks</b>	<b>Internal</b>	<b>80</b>	<b>External</b>			<b>120</b>	<b>Total</b>	<b>200</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>6</b>	<b>Credits</b>		<b>4</b>	

**COURSE OBJECTIVES:**

- To help the student understand the principles and technology of photography.
- To enable the student to understand the applications of photographs in interior
- To enable students to learn and understand the methods for blogging and vlogging
- To build the ability in students to create a website and be able to host it as well.
- To enable students to be updated and also to bring the interest of technology into the work.
- To ensure the student understands the various aspect of composition lighting , color
- And integration of all these aspects into one project.

**COURSE OUTCOME:**

- 1 To develop a keen eye for compositions through photography.
- 2 To admire and capture the essence of aesthetics in Interior design projects.
- 3 To appreciate the various compositions in the nature and in natural elements.
- 4 To understand of the play in interiors through various interior lighting ideas.
- 5 To understand and apply color theory through color wheel and color psychology.
- 6 To be able to integrate all aspects of design in the process.

**UNIT – I PRINCIPLES OF COMPOSITION**

Rule of thirds, perspective-worm’s eye view, normal eye view, bird’s eye view, one-point perspective, two-point perspective, three point perspective, exercises in composition

**UNIT – II PRINCIPLES OF PHOTOGRAPHY**

Technical definitions, understanding a camera, anatomy of a SLR camera, technical setting in a SLR camera, different types of lenses

**UNIT – III PRINCIPLES OF INTERIOR LIGHTING**

Technical definitions, lighting sources, types of lighting fixtures, types of lamps, calculating lighting levels, flash photography, types of flashes, controlling lighting levels with flash photography  
Exercise in interior lighting photography with artificial light and black and white photos

**UNIT – IV PRINCIPLES OF COLOUR**

Color rendering in photographic medium, color rendering in photographs under different lighting condition, lighting colors and its effect on a photograph, color filters in a camera  
Exercise on color photography of interiors

**UNIT – V INTEGRATION**

Project work/exercise in integrating all prior units

**SUGGESTED READINGS**

1. Point view- The art of architectural photography , E.Manny A Ballan, VNR 2010
2. Professional photography –photographing buildings, David Wilson, Rotovision 2001

18IDPE731B	MARKETING TECHNIQUES						SEMESTER-VII			
Marks	Internal	80	External			120	Total	200	Exam Hours	3
Instruction Hours/Week	1	0	T	0	P/S	6	Credits		4	

### COURSE OBJECTIVES:

- To understand the need of techniques to market the creative ideas of the studio.
- To understand various methods of marketing that can be applied during the client meetings.
- To understand and build a marketing strategy.
- To be able to understand the customers and hence provide design by understanding the psychology of the client.
- To understand the hierarchy of the management chain and to execute project with a strategy
- To understand the organizational capabilities and to understand the responsibility in a marketing position.

### COURSE OUTCOME:

1. To be able to market and obtain techniques to sell the knowledge gained and
2. to be able to build the requirements of the clients through proper communication and understanding.
3. To be able to modulate and design a technology to market a service or a product
4. To understand the various tools that are used in marketing and to use the most suitable one in the presentation and execution.
5. To be sensitive to the customers needs and to be able to organize and delegate the process to the next team for the carry over.
6. To be able to understand the position in marketing and hence behavioral pattern to be regulated.

### UNIT I WHAT IS MARKETING?

Introduction, definition, Organizational conditions and USP, Environmental factors, marketing concept – marketing strategy – marketing tactics, Planning, operation and Implementation.

### UNIT II BUILDING A MARKETING STRATEGY 6

Competitive settings, marketing decisions in a competitive setting, formulating overall marketing strategy, factors in selecting marketing inputs, the three C's of a marketing strategy, Components of a product/market strategy, hierarchy of strategies, how to develop a product/market strategy, finding a suitable market strategy.

### UNIT III UNDERSTANDING CUSTOMERS 6

How marketing influences society – economic aspects, buyers behavior, the environment, how society influences marketing – public opinion and political pressure, legislative action, pitfalls of neglecting customers, management mistakes, benefits of understanding customers, types of benefits, feature Vs benefits.

### UNIT IV MANAGING VALUE 5

Components of perceived value, perceived value analysis, measuring perceived value, customer management, role of perceived value in competition, strategic themes, increasing perceived value.

### UNIT V ORGANISATIONAL CAPABILITIES AND MARKETING POSITIONING 8

Analyzing competitors, capabilities and market strategies, types of capabilities, evaluating capabilities, competitive advantage and benefit advantage, macro trends, market segmentation, characteristics of market segment, determining a target market, role of segments and target market in marketing strategy, segment identification analysis, segments and decision making, market selection criteria, types of market segments, what is positioning, competitive advantage analysis, determining positioning, positioning and perceived value.

**SUGGESTED READINGS**

1. Marketing 101, Don Senton, Wiley. 2011
2. Fundamentals of Modern marketing, Edward w. cundiff, Richard R.Still, Norman A.P Goroni, PHI. 2001
3. Marketing Management, Phillip Kotter, PHI. 2015

<b>18IDPE731C</b>	<b>CREATIVE ART AND CRAFT</b>							<b>SEMESTER-VII</b>			
<b>Marks</b>	<b>Internal</b>	<b>80</b>	<b>External</b>				<b>120</b>	<b>Total</b>	<b>200</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>6</b>	<b>Credits</b>			<b>4</b>	

### **COURSE OBJECTIVES**

- Detailed study of the characteristics of Indian arts and crafts and its application in the interiors.
- To enable students to understand various art cultures in various cities of our country
- To appreciate art and craft based on the various eras in the history of art and craft.
- To bring different thinking levels of art like decoupage framing etc.
- To enable students to create products that is rich in art and the culture of the given state.
- To enable students to conceptualize interior design in various art forms.

### **COURSE OUTCOME**

1. To be able to appreciate the various styles of Interior detailing through art and craft in the world over.
2. To understand the unconventional methods of practicing art in various states of our country.
3. To understand and learn from the history of art and craft
4. To create objects with respect the applications of knowledge gained.
5. To understand various styling of art and craft from various parts of the world.
6. To understand various art movements and its importance in the revolution of art and craft.

### **UNIT – I INTRODUCTION TO CREATIVE ARTS AND CRAFTS 5**

Introduction to creative arts and crafts in India – its application in interior design – materials – Art movements through history – Traditional arts and crafts of India – Folk arts of India

### **UNIT – II TRADITIONAL ARTS AND CRAFTS OF INDIA 5**

Traditional arts and crafts of various states of India including – Tamilnadu, Karnataka, Kerala, Andhra Pradesh, Goa, Rajasthan, Gujarat, Kutch, Uttarpradesh, West Bengal, Orissa, Bihar, Jammu and Kashmir, etc.

### **UNIT – III ART MOVEMENTS IN POST MODERN INDIA 6**

Art Movements in Post Modern India and their influences in Interior design – Abstract Expressionism, Pop art, Minimal art, Conceptual art – Neo Expressionism – Computers in Arts.

### **UNIT – IV CREATIVE ART OBJECTS 7**

Creating decorative art objects –picture framing, macramé, decoupage, wall hangers, ceramic painting, murals etc

### **UNIT – V PROJECTS 7**

Assignment or projects on application of the Art in interior spaces such as – Reception, Lobby spaces, Theme Boutiques, Hotel, Restaurants, etc.

### **SUGGESTED READINGS**

1. Francis D.K.Ching, Interior Design Illustrated VNR Publication, New York 1987
2. Edith Thomory, A History of fine arts in India and the west, Orient Longmann publishers Pvt Ltd, New Delhi. 2004
3. Publication on Traditional arts and crafts on india, Ministry of Handicrafts Development, Government of India. 2018
4. Johhanes Itten, The Art of colour, John Wiley and Sons, USA, 1973.



18IDPE731D	PRESENTATION TECHNIQUES						SEMESTER-VII			
Marks	Internal	80	External			120	Total	200	Exam Hours	3
Instruction Hours/Week		L	1	T	0	P/S	6	Credits		4

### COURSE OBJECTIVES

- To equip the students with various tools of sketching and rendering
- To equip students to use pencils, pens, charcoal, ink brushes etc.
- To familiarize the students with some of the concepts of 3D modeling and the presentation techniques.
- To introduce to them various software for presentation for coloring and various other techniques.
- To enable students to be equipped for client meetings for presentation and detailing.
- To understand the color theory and to match appropriate color for appropriate sheets and building types.

### COURSE OUTCOME.

1. To introduce the students the making of complete presentation and the essentials of presentation skills.
2. To build their drawing and sketching skill.
3. To encourage natural talent and to exhibit the same
4. To be confident in combinations in color and textures.
5. To render with pen and ink.
6. To render with any medium of colors for the presentation

### UNIT- I COLORING STUDY

Introduction of colors, Usage of water colors, poster colors, pen & ink, rendering techniques, etc.

### UNIT- II DRAWING AND SKETCHING INTERIOR ENVIRONMENTS

Drawing and sketching interior environments, one point interior perspective, two point interior perspective, refined linear perspective methods, two point plan projection method, and perspective traced from photographs.

### UNIT- III RENDERING WITH PEN AND INK

Introduction to pen and ink rendering, materials, media and tools, rendering orthographic projection drawings, rendering perspective drawings.

#### **UNIT- IV RENDERING WITH COLOUR PENCILS AND SKETCH PENS**

Rendering of interior perspectives with colour pencils and sketch pens – stroke effects, smudge effects – use of schoeller and kent sheets – leather cartridge etc.

#### **UNIT- V RENDERING WITH POSTER/WATER COLOURS**

Use of kent/ cartridge sheets for poster colours and waterman/cartridge sheets for water colours – transparency effects in water colours – block effects in poster colours. TOTAL 30

#### **SUGGESTED READINGS**

1. Interior Design Visual Presentation 2nd and 3rd Edition-Maureen Mittom
2. Architects Sketching and Rendering techniques for designers and architects.- Stephen.A.Klimet
3. Architectural Rendering Techniques-A Color Reference-Mike.W.Lin
4. Color Drawing-Design drawing skills & techniques for architectsMichael.E.Doyle.
5. Color Vision-Leo Marvullo 6. Water Color-Hon graham Scholes

<b>18IDPE731E</b>	<b>ADAPTIVE REUSE AND RECYCLING</b>						<b>SEMESTER-VII</b>			
<b>Marks</b>	<b>Internal</b>	<b>80</b>	<b>External</b>			<b>120</b>	<b>Total</b>	<b>200</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>6</b>	<b>Credits</b>		<b>4</b>	

### **COURSE OBJECTIVES**

- To enable the student to understand the need for adaptive reuse of old heritage buildings and applications of using recycled materials.
- To enable students to understand the importance of the nature and its materials that can be recycled.
- To introduce adaptive reuse or up cycling of products and the challenges hence faced.
- To understand the Need for conservation.
- 

### **COURSE OUTCOME**

1. To expose the students to the basics of adaptive reuse and recycling
2. To understand the importance of heritage buildings and the treasures within the same that can be reused and recycles.
3. To be sensitive to the environment and to practice sustainable design through recycling and reuse.
4. To avoid materials that cannot be reused.
5. To use materials that have natural resources in abundance in the environment.
6. To conserve and recycle water as a basic survival commodity

### **UNIT- I NEED FOR ADAPTIVE REUSE**

Cultural inheritance – heritage buildings and old structures – ascertaining the structural stability – estimation of the prolonged life of the building – strategies of adaptive reuse – investigation into material finishes etc.

### **UNIT- II NEED FOR RECYCLING OF MATERIALS**

The logic behind recycling – recycling of steel, wood, glass etc - estimation of the quality of recycled timber – criteria for recycling of steel, glass etc.

### **UNIT- III CONCEPT OF SUSTAINABILITY**

Earth summit declaration – definition of sustainability – economic, social and environmental issues – green rating of buildings – criteria for LEED rating.

## **UNIT- IV RECYCLING OF WASTE WATER**

Sullage and sewage – techniques of water purification for sullage – treatment plant for sewage – techniques of biological and chemical purification.

## **UNIT- V NEED FOR CONSERVATION**

Architectural conservation – conservation of heritage and important buildings – levels of intervention – structural, construction related, finishes etc. Revival of old building techniques and finishes.

### **SUGGESTED READINGS**

1. Harimohan Pillai – Heritage conservation and cultural continuity – Saraswatham publishers, 2002
2. Sustainable building design manual – TERI publication, 2004.
3. Waste management and recycling – Compiled by C.T. Lakshmanan, SRM University.
4. Sandra F Mendler - The HOK Guide book for sustainable design – John Wiley and Sons, Canada,2002.
5. Conservation guidelines for pondichery – DTCP, Pondichery – INTACH 2000.

<b>18IDPE731F</b>	<b>TEXTILE DESIGN</b>							<b>SEMESTER-VII</b>			
<b>Marks</b>	<b>Internal</b>	<b>80</b>	<b>External</b>				<b>120</b>	<b>Total</b>	<b>200</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>		<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>6</b>	<b>Credits</b>		<b>4</b>	

### **COURSE OBJECTIVES**

- To gain knowledge and understanding of the functional and aesthetic requirements of textiles for a range of applications.
- To understand the textures and qualities of the fabrics involved
- To understand the various uses of textiles at various levels of window dressing, upholstery paneling and other interior holdings.
- To introduce the various possibilities of color in design through textile.
- To understand various handmade and machine made technologies involved in fabric design and printing.
- To introduce the natural printing methods and eco friendly approach in fabrics use in design.

### **COURSE OUTCOME**

1. To familiarize the students of Interior Design on textile materials used in interior.
2. To introduce the ability to define fabric through texture and quality.
3. Ability to use fabrics in various aspect of design and not limit the ideas to just window furnishings and upholstery.
4. To understand fabric from its basic composition and hence use the right design for right climatic conditions.
5. Ability of the student to identify various crafts on fabric from India and its importance with its properties.
6. Ability to differentiate various color properties on fabrics and its appropriate usage.

### **UNIT- I- INTRODUCTION TO FABRICS**

Fabric, yarn and fiber structure, Fabric structure- woven- warp, weft, selvedge ,knitted- course, non-woven, Fabric types and classification- woven, including plain, twill, satin, Jacquard, crepe and pile weaves, knitted- including single knit, double knit, tricot knit, pile knit, lace and net ,non-woven- including felts webs and films, identification and properties of fabrics, yarns and fibers.

### **UNIT- II -APPLICATION OF ELEMENTS AND PRINCIPLES**

Application of elements and principles of design across a range of textiles. Describe and analyze elements and principles of design -furnishings, textile arts, non-apparel. Functional and aesthetic requirements and features of textile range.

### **UNIT- III COLOUR ON FABRICS**

Fabric coloration and decoration- Principles of applying color to fabrics. Textile arts and crafts in interiors, traditional and modern materials and methods. Preparing samples on tie and die printing, batik printing, appliqué, macramé and braiding.

### **UNIT- IV- FURNISHINGS**

Furnishings-classification, types of curtain, curtain construction, selection criteria relation to backgrounds in walls, floors and ceilings. Slip covers, cushion covers, bed linen and table linen  
Floor coverings -rugs and carpets, types selection, care and maintenance, installation of floor coverings 64 B.Des (Interior Design) 2010

### **UNIT- V -OTHER NATURAL MATERIALS**

Jute or hessian – dyed jute fabric and its applications – various kinds of processed leather, its application in interior design.

### **SUGGESTED READINGS**

1. Inside today's home, Faulkner, R. and Faulkner 1987, Rinehart Winston, New York
2. Interior Design & Decoration, Sherril Whiton, Prentice Hall
3. Introduction to home furnishings, Stepat, D.D, 1991, The macmillan company, New York.
4. The themes and Hudson manual of textile printing, Storey joyce, 1992, London
5. Colour in interior Design Jhon, F.P, 1997, Mc Graw H

<b>18IDS821</b>	<b>DESIGN THESIS</b>							<b>SEMESTER-VIII</b>		
<b>Marks</b>	<b>Internal</b>	<b>320</b>	<b>External</b>			<b>480</b>	<b>Total</b>	<b>800</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>2</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>28</b>	<b>Credits</b>			<b>16</b>

#### **COURSE OBJECTIVE:**

- To ensure consolidation and application of the knowledge gained in preceding years of the programme in the context of a design project of the student's choice.
- To enable addressing of specific projects through key, identified issues inherent in the project or to enable development of thought processes in specific areas/aspects into a project.
- To facilitate development of ability to complete and handle projects independently as a precursor to professional life.
- To encompass the capacities to handle large scale projects and to be able to choose the scale of the project based on the knowledge acquired.
- To be given a chance to research the area that is of the students choice and to analyze the data and to be able to produce sensible design parameters based on the analysis.
- To be introduced to the professional practice nuances with respect to the design field.

#### **COURSE OUTCOME:**

1. Skill, knowledge and expertise in the domain of interior design.
2. Ability to handle a major interior design project independently through all stages
3. To be able to scale project size based on the parameters asserted by the futuristic clients.
4. To be able to design in relationship to the surroundings and also have a pragmatic and vernacular approach to the design chosen.
5. To be able to handle complex design problems
6. To introduce them into the professional world of design and detailing

Each student is expected to prepare a design thesis based on the preliminary work undertaken in the Interior design studio under an approved guide.

Thesis should reflect the knowledge gained from all the courses undertaken by the student in all the previous semesters.

The particulars of the schedule, content, presentation, format etc is to be decided by the department from time to time and shall be strictly followed.

At the end of the semester each student is expected to submit all original drawings prepared as per the department specifications. Three copies of the report in the specified format should be submitted to the department after the approval of the respective guides.

The department shall schedule the viva voce at its convenience only after the receipt of the thesis by the student. The performance sheet submitted by the guide and thesis committee should be the basis for allowing the student to appear for the final viva voce.

The end exam is to be conducted by a jury comprising of an external examiner. One internal examiner and head of the department or his nominee.

<b>18IDS831</b>	<b>DISSERTATION</b>						<b>SEMESTER-VIII</b>			
<b>Marks</b>	<b>Internal</b>	<b>80</b>	<b>External</b>			<b>120</b>	<b>Total</b>	<b>200</b>	<b>Exam Hours</b>	<b>3</b>
<b>Instruction Hours/Week</b>	<b>L</b>	<b>1</b>	<b>T</b>	<b>0</b>	<b>P/S</b>	<b>6</b>	<b>Credits</b>			<b>4</b>

**COURSE OBJECTIVE:**

- To inculcate the spirit of research in architecture.
- To enable the acquisition of in-depth knowledge in a specific aspect/ issue in the discipline of architecture
- To develop perspectives on the same through reading, study, analysis and thought.
- To develop the skill of experimentation by their own course of study
- To facilitate the development of a coherent line of thinking and express it through clear writing.
- To serve as prelude to Thesis.

**COURSE OUTCOME:**

1. Student will learn to research on a specific interested topic and collect appropriate data
2. Student will develop the skill of analytical approach towards the related topic
3. Student will be able to develop a coherent line of thought based on point of view,
4. Student will be able to do observation, analysis and study
5. Student will be able to prepare a dissertation report which is based on accepted norms of technical writing.
6. Student will become prepared for the larger thesis project.

Dissertation/Special studies subjects will be the choice of the individual related to the thesis project chosen. This Study process should increase the value of design understanding. The dissertation topic must be a research based study to understand n depth the subject in consideration. The individual must use these dates obtained in their thesis and a report of the same must be produced by the student.

Note: The work will be periodically reviewed. The study has to be presented in the form of a report with illustrations and as a seminar for final assessment, along with the final product.