



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)

Accredited with "A" grade by NAAC
Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119
www.sathyabama.ac.in



SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

DEPARTMENT OF DESIGN

Board of Studies meeting for B.Des. (Interior Design) held on 02-07-2020

Venue: Virtual meet in ZOOM platform

Time : 9.00 a.m. to 3.00 p.m

Members present:

External members:

- 1) **Ar.Mahesh Radhakrishnan**
Chief Architect, MOAD
- 2) **Ar. Hariesh K. Shnankaran**
Chief Architect, BEANBEE

Internal Members:

- 1) **Prof.Dr.DevyaniGangopdhyay**
Dean and HOD, Department of Architecture
School of Building and Environment
- 2) **Ar.EbinHorrison**
Associate Professor
- 3) **Ar.Arulmalar .R**
Associate Professor
- 4) **Ar.V.Shankar**
Associate Professor
- 5) **Ar.YusufChiniwala**
Assistant Professor

The previous Board of Studies held on 27.04.19 had approved the proposed curriculum and the detailed syllabus of I, II, III and IV semesters.

The Board of Studies held on 02.07.20 approved the curriculum and the syllabus of V, VI, VII and VIII Semester of B.Des. with the incorporation of suggestions made as presented in the minutes of meeting given below.

A Board of Studies meeting was held as Virtual mode in ZOOM platform on 2nd July2020 with the following agenda:

1. Welcome address, opening remarks on the proposal of REGULATION 2019 and the methodology adopted.
2. Detailed discussions on the proposed syllabus and proposed Regulation 2020.
3. Any other matter with the permission of Chair.

Minutes of the Meeting Conducted on 2/7/2020

B.Des (Interior Design)

- Dean Dr. Devyani Gangopadhyay welcomed the Committee members and presented the welcome address and briefed the agenda of the meeting. She presented the summary of the Board of Studies meeting held on 20.04.20.
- Ar.Mahesh stressed the importance on what are we making the students ready for, after graduation?. He also pointed out look into the interior designers at the global level.
- Ar,Mahesh suggested to incorporate ways to build attitude towards design amongst the students.
- Ar.Mahesh gave a direction to focus on hands on experience in specific materials in each semester as workshops.
- Ar.Hareish suggested to include ‘accessories and possessions; to be added in the course ‘society, culture and environment;’
- Ar.Mahesh pointed out that the arts and crafts studio to focus on one or two materials.
- Ar.Mahesh pointed out to address the heterogeneous nature of the students. He also stressed on the need to explore the manufacture, strength as well as the applications of plywood with a focus on field visits.
- Ar.Mahesh said the students need to be clear with the focus of the curriculum.
- Both the panel members suggested to look into the syllabus critically with a focus on ‘interior design’.
- The members suggested to reframe the contents included in SDEA1301 Unit 1.
- The members pointed out that the contents in the ‘Building services’ should be more oriented towards interior designing rather than the architectural aspect.

- Ar.Mahesh posited the need to reframe the content of Materials and construction studio. Besides, he also added that the ‘computer applications’ need to focus on finishes.
- The experts pointed out that the content in ‘Design Management and Interiors’ may be merged with ‘Estimation and Specifications’ which can be extended for two semesters.
- The members pointed out that the contents on Professional Ethics and Practices needed to be simplified for undergraduate level.
- Ar.Mahesh pointed out that the syllabus of professional practice can look into the practical functioning of offices .
- Ar.Hariesh stated the a course needs to be introduced or included as a part of any other course where the knowledge about ‘Identity and Branding’ be included.
- Ar.Mahesh suggested spreading the electives throughout the curriculum.
- The members suggested that in Interior Design Studio, complexity needs to be added slowly but continuously.
- Ar.Hareish pointed out that ‘Portfolio development’ can be included as a part of the curriculum.
- Ar,Hariesh pointed to make the pre thesis open ended.
- The members suggested that estimation and preparation of Bill of quantities may be addressed before the students go for Professional Training.
- The members suggested reframing the contents of the ‘capstone project’.
- Ar.Hareish pointed that hybrid projects like development of ‘apps’ can be focused on.
- Both the panel members suggested establishing the links among all the courses.

SDE 1301	CREATIVE THINKING PROCESS AND METHODS	L	T	P	Credits	Total Marks
		2	0	0	2	100

COURSE OBJECTIVES:

- To introduce 'design' as an integral feature and a product of larger socio-cultural issues and practices.
- To familiarize the young minds with the nature of design problems, methodology, creative techniques and the outcomes
- To explore the various channels to creativity and the directions through which they are expressed in the built form and the environment.

UNIT 1 INTRODUCTION TO DESIGN

6 Hrs.

Definition of Design, Understanding of Design, Purpose and nature of good design, evaluation of design, types of Design classifications, role of a designer, Scale, process and production; Context for design problems, design process, stages in the design processes, from different considerations - Broadbent, Christopher Alexander, Wade.

UNIT 2 DESIGN PROBLEMS AND DIRECTIONS

4 Hrs.

Context for the rise of the Design Methodology Movement, Different approaches in design- synchronous and asynchronous approaches, regression and escalation, participatory approach to design, design as process involving time and people, problem solving or intuitive, formulation of problems, nature of creative design problems, goals in design, different types of designs and the thrust given to the various solutions.

UNIT 3 DESIGN THINKING

8 Hrs.

Understanding the terms creativity, imagination etc. Theories on thinking, convergent & divergent thinking, lateral & vertical thinking, six hat thinking by Edward de Bono. Creative techniques like checklists, brainstorming, diagramming, mapping, parametric exploration, etc, design puzzles & traps, blocks in creative thinking. Introduction to various theories in Design such as aesthetic theory, proxemic theory. Theory related to human behaviour and environmental design.

UNIT 4 CHANNELS TO CREATIVITY

8 Hrs.

Types of concepts, process of creativity, tangible and intangible channels to creativity in Architecture and Design - the obscure, metaphors, transformation, paradox, precedents, nature, association with other arts, literal interpretation, materials, geometry, origami, literature and poetry etc. Philosophies of famous Architects and Designers.

UNIT 5 CONSTRUCTIVE ASSIGNMENTS

4 Hrs.

Demonstrate comprehensive understanding through accompanying assignments, group discussions, and site visits.

Max. 30 Hours

COURSE OUTCOME:

- CO1** Understand the types of design problems, need to decode the brief to evolve 'problem driven outcomes.
- CO2** Understand, compare and synthesize mapped design methodologies in various contexts.
- CO3** Critically analyze the different types of thinking.
- CO4** Comprehend the various creative techniques in design related fields
- CO5** Investigate techniques to identify new directions in design thinking.
- CO6** Identify the various channels to creativity and critically analyze the direction through which the ideas are translated in architectural domain

TEXT / REFERENCE BOOKS

1. Alexander C., (1977). Pattern Language, Oxford University Press.
2. De Bono E., (1970) Lateral Thinking: Creativity step by step, Harper & Row.
3. Broadbent G., (1973) Design in Architecture, Architecture & Human Sciences, John Wiley & sons, New York
4. Thackara J., (2005). In the Bubble: Designing in a Complex World, The MIT Press.
5. Hanington B., Martin B., (2012) Universal Methods of Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions, Rockport Publishers.
6. Whitten J., Bentley L., (2005). Systems Analysis and Design Methods, McGraw-Hill/Irwin.

SDE1302	COMMUNICATING DESIGN	L	T	P	Credits	Total Marks
		2	0	0	2	100

COURSE OBJECTIVES:

- To develop methods for critical thinking and analysis.
- To help the students develop opinions on various design related topics.
- To develop new platforms and formats for their writing.
- To examine how space is conceived and conceptualised
- To evaluate texts
- To investigate “visual language”, symbolism, and some of the pictorial devices, materials, and techniques employed by designers to tell stories visually

UNIT 1 COMMUNICATION PRINCIPLES

6 Hrs.

Process of Communication. Transmission of ideas, facts & figures from one person to another. Kinds of Communication: Oral and Written, Verbal and Non-Verbal. Levels of Communication: Intrapersonal, Interpersonal, Group, Mass Communication.

UNIT 2 READING DESIGN

4 Hrs.

Reading skills: Model of reading to learning, reading tactics and strategies, reading purposes – associated apprehensions, reading for meaning, reading outcomes; Reading Space and its qualities; Presentations and writings of great design theorists

UNIT 3 DESIGN STORYTELLING AND NARRATIVES

8 Hrs.

Elements of a good story: facts, situation, characters, plot and resolution of a design project; Building context in the design process: Emotional, Environmental, Social context; Organising ideas- Personas, storyboards, and flowcharts; Documenting processes through writing

UNIT 4 REPRESENTATION OF SPACE

8 Hrs.

Innovation with orthographic drawings- beyond the plan, elevation, section; Perspectives and Montages; Maps and Models; Interior space and its occupation, experience and perception; Constructing and interpreting layers of meaning within interior spaces.

UNIT 5 CONSTRUCTIVE ASSIGNMENTS

4 Hrs.

Demonstrate comprehensive understanding through accompanying assignments, group discussions, and site visits.

Max. 30 Hours

COURSE OUTCOME:

- CO1** Explore innovative ways of researching and writing about contemporary design and culture.
- CO2** Create valid arguments and to argue for and against ideas
- CO3** Analyse structure of oral and written arguments
- CO4** Critically evaluate design ideas.
- CO5** Understand and apply various spatial representations for their own designs.
- CO6** Produce a booklet of the ideas and themes discussed.

TEXT / REFERENCE BOOKS

1. Cottrell, S. (2005). Critical Thinking Skills: Developing effective analysis and argument. New York: Palgrave McMillan.

SDE 9402	COMPUTER APPLICATIONS I	L	T	P	Credits	Total Marks
		0	0	6	3	100

COURSE OBJECTIVES:

- To provide the student of Interior Design a foundation in the techniques of drafting using computer as a tool.
- To introduce computer operation principles and explore image editing through a visual composition using graphics.
- To impart training in computer aided 2D drafting and 3D modelling.
- To expose the students to visual composition using computer tools.

UNIT 1 2D DRAWING OUTPUT IN AUTOCAD

30 Hrs.

Understanding the use of various drawing tools and object editing, setting up units, scales, limits, drawing tools, drawing objects, object editing and text, dimensioning in CAD. Transparent overlays, hatching utilities, line type, line weight and colour, Multiline, Polyline, etc. Styles, blocks and symbol library in ACAD, File management, retrieving data, attributes, Layout and plotting.

UNIT 2 PRODUCTIVE TECHNIQUES USING COMPUTER TOOLS

10 Hrs.

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 3 INTRODUCTION TO 3D MODELLING

30 Hrs.

Importing AutoCAD drawing File, Introduction to software interface; Basic Tools for Editing and Creating 3d models- Material application, using material editor, material browser, mapping textures, Lighting, cameras and render effects, environment mapping, fogs and atmospheres.

UNIT 4 INTRODUCTION TO IMAGE EDITING

20 Hrs.

Basic Tools for Editing and Creating Graphics in image editing software - Layers (layer styles opacity-adjustment layers) Basic Retouching (Colour, manipulations, Levels, Curves, Seeing Colour accurately, Patch tool, Cropping, Reading palettes, Dust and scratches) - Advanced Retouching (smoothing skin, smoothing wrinkles, special colour effects: black and white, sepia, grainy). Software Interface, creating and saving images, tool box and tools, special effects.

Max. 90 Hours

COURSE OUTCOME:

- CO1** Possess the skills and techniques for editing and creating graphics.
- CO2** Visualize complicated forms
- CO3** Understand in producing photo realistic image of 3D forms
- CO4** Demonstrate effective communication of drawings through software techniques
- CO5** Understanding the work flow/design process through Autocad, 3D, and image editing software
- CO6** Apply the knowledge of Computer application for development of projects

TEXT / REFERENCE BOOKS

1. Watt A.,(1989). Fundamentals of Three-Dimensional Computer Graphics, Addis Wesley, Massachusetts
2. Tikoo, S., (1999) AutoCAD 2000: A Problem-Solving Approach, Thomson Learning.
3. Mccelland D., (2007) Photoshop 7 Bible Professional Edition, Wiley John & Son INC, New York

SDE2301	MATERIALS AND CONSTRUCTION - I	L	T	P	Credits	Total Marks
		2	0	2	3	200

COURSE OBJECTIVES:

- To identify the components of a building including the structural systems.
- To understand the properties and uses of varied natural, synthetic materials.

UNIT 1 NATURAL MATERIALS

14 Hrs.

Natural building materials – renewable and nonrenewable resources - Definitions, types and applications - soil, sand, aggregate, clay, gravel, timber, coconut leaf, reed, bamboo, Palmyra leaf, lime – Fencing and temporary shelters. Wood-Soft and hardwood. Fabrics – textile, Jute, leather etc. different types and their uses.

UNIT 2 SYNTHETIC MATERIALS

16 Hrs.

Synthetic Materials–Different types of Glass, their properties, manufacturing processes and uses. Plastics – injection moulding& other manufacturing methods, etc. Plywood, laminated wood and particleboards–properties, manufacture & uses.

UNIT 3 BUILDING COMPONENTS

20 Hrs.

Introduction to the fundamental components of a building (sub-structure & superstructure) indicating - Foundation –brick footing, stone footing &rcc column footing; concrete flooring, plinth beam & floor finish; superstructure- brickwork with sill, lintel, windows& sunshade, Flat rcc roof with weathering course, parapet & coping.

UNIT 4 STRUCTURAL SYSTEMS

10 Hrs.

Principles of load bearing Construction – Components of a load bearing wall &rcc slab roof system-rcc beams, columns and framed structure - simple brick footing - principles of bonding,

Max. 60 Hours

COURSE OUTCOME:

- CO1** Understand the properties and uses of natural materials like wood and fabrics, synthetic materials like glass and plastics and their appropriate application techniques.
- CO2** Select and specify materials based on the its properties and requirements
- CO3** Understand the components of a building and methods of construction including foundation, plinth, superstructure, floorings, openings, roofs and finishes.
- CO4** Get familiarized with the varied load bearing systems.
- CO5** Able to design interior elements that go with the existing architectural and structural components
- CO6** Have an overview of the various structural systems for architectural and interior spaces.

TEXT / REFERENCE BOOKS

1. Parker, Harry, (1957). Materials and Methods of Architectural Construction, John Wiley & Sons, London
2. Rangwala S.C., (1987). Engineering Materials, Charotar Publishing House, Anand.
3. Reid, E. (2013). Understanding Buildings, a Multidisciplinary Approach. United Kingdom: CRC Press.
4. Spencke R.J., Cook D.J., (1983). Building Materials in Developing Countries, John Wiley and Sons.

SDE2302	INTERIOR SERVICES 1	L	T	P	Credits	Total Marks
		2	0	2	3	200

COURSE OBJECTIVES:

- To develop an understanding of building services such as water supply, drainage and plumbing system.
- To familiarize them with the advanced service integration system and their applications in building.
- Evolving understanding in students to choose appropriate systems and integrate the same in their design projects.

UNIT 1 WATER SUPPLY IN BUILDINGS 10 Hrs.

Standard of portable water and methods of removal of impurities, Consumption order of water for domestic purposes, distribution system, service connection from mains, house-service design, tube well, pumping of water, types of pumps, cisterns for storage

UNIT 2 BUILDING DRAINAGE 10 Hrs.

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

UNIT 3 PLUMBING 20 Hrs.

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.

UNIT 4 SERVICES STUDIO 20 Hrs.

Preparation of plumbing layout of a single storey building & working drawing of various fittings and fixtures of water supply and sanitary installations. Components of Plumbing – sanitary ware -w.c, wash basin, bidet, bathtub, jacuzzi etc Sanitary fittings – taps, mixers, shower units, etc.

Max. 60 Hours

COURSE OUTCOME:

- CO1** Understand the basic principles of water supply and sanitation
- CO2** Describe the various components in a building drainage system.
- CO3** Attain knowledge about the drainage system for different types of buildings.
- CO4** Classify various sanitary fixtures and its applications.
- CO5** Possess skills and techniques necessary for the selection of various systems and their installation
- CO6** Prepare drainage and plumbing layout for a building.

TEXT / REFERENCE BOOKS

1. Water Supply and Sanitary Installations. (2005). India: New Age International (P) Limited.
2. Rangwala, S. C. (2005). Water Supply and Sanitary Engineering. India: Charotar Publishing House.
3. Basak, N. N. (2003). Environmental Engineering. India: Tata McGraw-Hill.

SDE 9301	INTERIOR DESIGN STUDIO III	L	T	P	Credits	Total Marks
		0	0	14	9	400

COURSE OBJECTIVES:

- To develop a sensitivity to design the interiors of public spaces incorporating services and the principles of place making.

The primary focus is on Anthropometry, Design methodology, Conceptual exploration and representation, Creativity, Scale/proportion, Documenting space, Graphic design, Concept evolution, Application of design principles and elements, design process, Portfolio development. There will be at least one major and one minor design exercise. The faculty can take up the exercises as per their order of preference. The order should be common across all sections. The faculty may achieve the stated minimum outcomes using appropriate strategies.

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

Max. 210 Hours

TEXT / REFERENCE BOOKS

1. Karlen, M. (2009). Space Planning Basics, 3rd ed. John Wiley & Sons
2. Dechiara J., Panero J., Zelnick M., (2011). "Time Saver Standards for Interior design and Space Planning", McGraw Hill, London
3. Binggeli, C., Ching, F. D. K. (2018). Interior Design Illustrated. United Kingdom: Wiley.
4. Panero J., Zelnick M., (1979). Human Dimension & Interior Space: A source book of Design Reference standards, Watson – Guptill.
5. Mitton M., (2003). Interior Design Visual Presentation: A Guide to Graphics, Models, and Presentation Techniques. John Wiley and Sons.
6. Rengel R, (2002). Shaping Interior Space, Fairchild Books & Visuals.

SDE2301	MATERIALS AND CONSTRUCTION - I	L	T	P	Credits	Total Marks
		2	0	2	3	200

COURSE OBJECTIVES:

- To identify the components of a building including the structural systems.
- To understand the properties and uses of varied natural, synthetic materials.

UNIT 1 NATURAL MATERIALS

14 Hrs.

Natural building materials – renewable and nonrenewable resources - Definitions, types and applications - soil, sand, aggregate, clay, gravel, timber, coconut leaf, reed, bamboo, Palmyra leaf, lime – Fencing and temporary shelters. Wood-Soft and hardwood. Fabrics – textile, Jute, leather etc. different types and their uses.

UNIT 2 SYNTHETIC MATERIALS

16 Hrs.

Synthetic Materials–Different types of Glass, their properties, manufacturing processes and uses. Plastics – injection moulding & other manufacturing methods, etc. Plywood, laminated wood and particleboards–properties, manufacture & uses.

UNIT 3 BUILDING COMPONENTS

20 Hrs.

Introduction to the fundamental components of a building (sub-structure & superstructure) indicating - Foundation –brick footing, stone footing & rcc column footing; concrete flooring, plinth beam & floor finish; superstructure- brickwork with sill, lintel, windows & sunshade, Flat rcc roof with weathering course, parapet & coping.

UNIT 4 STRUCTURAL SYSTEMS

10 Hrs.

Principles of load bearing Construction – Components of a load bearing wall & rcc slab roof system-rcc beams, columns and framed structure - simple brick footing - principles of bonding,

Max. 60 Hours

COURSE OUTCOME:

- CO1** Understand the properties and uses of natural materials like wood and fabrics, synthetic materials like glass and plastics and their appropriate application techniques.
- CO2** Select and specify materials based on their properties and requirements
- CO3** Understand the components of a building and methods of construction including foundation, plinth, superstructure, floorings, openings, roofs and finishes.
- CO4** Get familiarized with the varied load bearing systems.
- CO5** Able to design interior elements that go with the existing architectural and structural components
- CO6** Have an overview of the various structural systems for architectural and interior spaces.

TEXT / REFERENCE BOOKS

5. Parker, Harry, (1957). Materials and Methods of Architectural Construction, John Wiley & Sons, London
6. Rangwala S.C., (1987). Engineering Materials, Charotar Publishing House, Anand.
7. Reid, E. (2013). Understanding Buildings, a Multidisciplinary Approach. United Kingdom: CRC Press.
8. Spencke R.J., Cook D.J., (1983). Building Materials in Developing Countries, John Wiley and Sons.

SDE 9401	INTERIOR DESIGN STUDIO IV	L	T	P	Credits	Total Marks
		0	0	14	9	400

COURSE OBJECTIVES:

- To incorporate the various forms of thematic space making with traditional art and crafts from various parts of India.
- To create a thematic space making with Art and craft forms of our own culture in India – East, West, North, Central.

MODULE 1

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. Response to today's situation of urban society – For a given building create contemporary homes of modern society – needs, realities, value system etc.

MODULE 2

Applications of art / craft at public level spaces- lounge (hotel), restaurant of specific ethnic characteristics. Spatial and service standards for star hotels – integration of interior design schemes for rooms, restaurants, bars, health clubs, shopping arcade and other guest areas with the general theme of the hotel. Special ideas for suites and banquet halls – contemporary interior schemes to integrate new concepts in lighting and materials.

Max. 210 Hours

TEXT / REFERENCE BOOKS

1. Karlen, M. (2009). Space Planning Basics, 3rd ed. John Wiley & Sons
2. Dechiara J., Panero J., Zelnik M., (2011). "Time Saver Standards for Interior design and Space Planning", McGraw Hill, London
3. Binggeli, C., Ching, F. D. K. (2018). Interior Design Illustrated. United Kingdom: Wiley.
4. Julius Panero & Martin Zelnick, Human Dimension & Interior Space : A source book of Design Reference standards, Watson – Guptill, 1979.
5. Mitton, M. (2003). Interior Design Visual Presentation: A Guide to Graphics, Models, and Presentation Techniques. Germany: Wiley.
6. Lin M., (1993). Drawing and Designing with Confidence: A step-by-step guide, Wiley and Sons.
7. Rengel R., (2002). Shaping Interior Space, Fairchild Books & Visuals.
8. Pile. J., (2005). A history of interior design, Laurence King Publishing.
9. Jones R., (2008). Interiors of Empire: Objects, Space and Identity within the Indian Subcontinent, Manchester University Press.

SDE2401	MATERIALS AND CONSTRUCTION II	L	T	P	Credits	Total Marks
		2	0	2	3	200

COURSE OBJECTIVES:

- To introduce the building materials and the construction techniques used for the walls, floors and ceilings.
- To expose the different types of wall panelling systems and false ceilings.
- To give an insight to the various finishes and the applications.

UNIT 1 WALLS-TYPES OF MASONRY

14 Hrs.

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 2 FLOORS

14 Hrs.

Flooring: rammed earth, Natural stones like Shahabad, Tandur, Kota, Kadappa, Marble, Granite, etc., athangudi tiles, red oxide, terracotta tiles (Laying details), brick paving, glazed ceramic tiles, Vitrified tiles - Finishes: pointing, grouting, pavement, mud plastering, PCC.

Floor coverings - softwood, hardwood-resilient flooring-linoleum, asphalt tile, vinyl, rubber, cork tiles- terrazzo , marble & granite- properties, uses & laying. Floor tiles – ceramic glazed, mosaic and cement tiles - properties, specification for barrier free floors

Drawings indicating various types.

UNIT 3 FALSE CEILING & WALLPANELING

16 Hrs.

Construction of various kinds of false ceiling such as thermocol, plaster of paris, gypboard, metal sheets, glass and wood. Construction of domes, vaults, & other special ceilings; Paneling Using wooden planks, laminated plywood, cork sheets, fibre glass wool & fabric for sound insulation and wall paneling for thermal insulation.

UNIT 4 FINISHES

16 Hrs.

Paints- enamels, distempers, plastic emulsions, cement based paints- properties, uses and applications- painting on different surfaces –defects in painting, clear coatings & stains-varnishes, lacquer, shellac, wax polish & stains- properties, uses and applications. Special purpose paints-bituminous, luminous, fire retardant and resisting paints- properties, uses and applications, low VOC paints

Max. 60 Hours

COURSE OUTCOME:

- CO1** Gain comprehensive knowledge on various types of masonry walls.
- CO2** Classify and understand the different materials for floor finishes in interior design.
- CO3** Select and specify flooring materials based on its properties and intended use.
- CO4** Understand the construction techniques of false ceiling in interior spaces planning.
- CO5** Design and specify appropriate false ceiling and wall panelling materials for the design context.
- CO6** Comprehend the various types of finishes and the respective maintenance.

TEXT / REFERENCE BOOKS

1. Punmia, B. C. (2008). Building Construction. India: Laxmi Publications Pvt Limited.
2. Jeffries, D. (2004). The Flooring Handbook: The Complete Guide to Choosing and Installing Floors. United States: Firefly Books.

SDE2402	INTERIOR SERVICES II	L	T	P	Credits	Total Marks
		2	0	2	3	200

COURSE OBJECTIVES:

- To give an insight to basic concepts and various components in air conditioning.
- To introduce the fundamentals of fire safety measure and design principles in the interiors.
- To understand the principles of acoustics and the associated materials.
- To give an overview of electrical wiring systems in interiors.

UNIT 1 BASIC CONCEPTS AND SYSTEM COMPONENTS IN AIR CONDITIONING 16 Hrs.

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

UNIT 2 FIRE SAFETY AND ELECTRICAL SYSTEMS 18 Hrs.

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

UNIT 3 ACOUSTICS AND SOUND INSULATION 16 Hrs.

Room acoustics - resonance, reverberation, echo, 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 4 SERVICES STUDIO 10 Hrs.

Preparation of air conditioning layouts and electrical systems in a building.

Max. 60 Hours

COURSE OUTCOME:

- CO1** Classify of the different types of air conditioning system and ability to apply the same.
- CO2** Understand the need and applications of various electrical systems
- CO3** Understand the mechanism of fire safety systems and the respective installation
- CO4** Understand the fundamental principles of acoustics and its importance in architectural design
- CO5** Solve the acoustical design problems in a space by acoustic treatments
- CO6** Exposure to various fixtures and fittings of HVAC, fire protection and acoustical systems

TEXT / REFERENCE BOOKS

1. Langley, B. C. (2000). Fundamentals of Air Conditioning Systems. United States: Fairmont Press.
2. Jain, V. K. (2007). Fire Safety in Buildings. India: New Age International (P) Limited.
3. Lord, P., Templeton, D. (2019). Detailing for Acoustics. United Kingdom: Taylor & Francis.