SDEB1101	FUNDAMENTALS OF VISUAL ARTS	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To develop a perspective of artistic and creative expression through experimentation with different tools, techniques, and mediums in two and three-dimensional visual art forms.
- To understand cultural diversity by recognizing various traditional art forms prevalent in the country.
- To determine how visual art has influenced world cultures throughout history.

UNIT I CONCEPT AND MEANING OF VISUAL ARTS - VISUAL CULTURE 6 Hrs.

Definition and meaning of Visual Art; Categorization of Visual Art- Fine art, Contemporary arts, Decorative arts and crafts, Applied arts design - Understanding visual culture; Visual Theories; Visual Design; Symbolism, Time, Sound; Point of View, Visual Experience of historical artefacts, and relating visual experience to the cultural context.

UNIT II VISUAL ART HISTORY 8 Hrs.

Art history to come as various eras, styles, and isms- Pre-Renaissance: Prehistoric Era, Ancient Civilizations, Classical Civilizations - Study of chronological periods from prehistory to post-modern art and artists of the West, with a focus on the various movements that transformed its history - Study of chronological periods and developments in Indian art from prehistory to the 19th century.

UNIT III APPLIED ARTS 6 Hrs.

Applied Arts- Book cover design and illustration, cartoon, poster, advertisements for newspaper, magazine, hoardings, T.V., photography, computer graphics, animation, printing processes

UNIT IV ART CRITICISM AND AESTHETIC 10 Hrs.

Purpose of Art Criticism; Steps of Art Criticism: Description, Analysis, Interpretation, Judgement; Aesthetic theories in Visual Art, Painting, Architecture and Sculpture, Artistic Styles, Aesthetic Experience Modes of Aesthetic Experience, Basics of Aesthetic values, Aesthetics of Thinking and Creativity, Taste and Aesthetes, Aesthetics of Symbols and Language Qualities of Visual Art literal qualities, formal qualities, expressive qualities

CONSTRUCTIVE ASSIGNMENTS

Book reading and review - Examples and case studies – Presentations - Comprehensive understanding through accompanying assignments, group discussions

Max. 30 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Acquire basic knowledge about basic elements/principles of design and visual art.
CO2: Restate and exhibit an insight toward sensibility and aesthetic appreciation.
CO3: Demonstrate different and appropriate methodologies and tools for expressing and interpreting art forms..
CO4: Critically evaluate and make an assessment of art forms and its cultural background theories and principles of interiors
CO5: Criticize and visualize artistic styles and comprehend and represent their ideas through different medium

TEXT / REFERENCE BOOKS

1. Edward Treir,(1968), Form and Space, Thames and Hudson, London
2. Stanyer, P. (2003). The Complete Book of Drawing Techniques: A Professional Guide for the Artist. United Kingdom: Arcturus.
3. Dabrowski, M. (1995). Kandinsky compositions. New York: Museum of Modern Art
4. Wong, W. (1993). Principles of Form and Design. United States: Wiley.
5. Wong, W. (1997). Principles of Color Design. United Kingdom: Wiley.
6. Wong, W. (1972). Principles of Two-Dimensional Design. United States: Wiley.
7. Lawson, B. (2001). Language of Space, Architectural Press.
8. Tuan, Y., Hoelscher, S., (2001). Space and Place: The perspective of experience, University of Minnesota Press.
9. Ryan, M, (2004). Narrative across Media: The Languages of Storytelling, University of Nebraska Press. 4. Langellier K., Peterson B., (2004). Storytelling in Daily Life: Performing Narrative, Temple University Press.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB1102	ELEMENTS AND PRINCIPLES OF DESIGN	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To make the students learn the theoretical aspects of design and understand how it could be manifested in different aspects of design.
- To understand various ideologies from the works of great architects, interior designers, and product designers.
- To develop design vocabulary skills by exposing the students to visual, emotional effects and aesthetic design relationships like proportion scale, balance, symmetry, etc., by studying important examples.

UNIT I DESIGN VOCABULARY – PRIMARY ELEMENTS 8 Hrs.

Primary elements of Design – point, line, volume, shape - Linear, Planar, volumetric elements – Geometry in Design - texture, and color – in relation to light, pattern. Synthesis of these elements evolves understanding of basics of design - static and dynamic aspects of different compositions of design elements– order to chaos - Regularity and irregularity.

UNIT II ORDERING PRINCIPLES 8 Hrs.

Introduction to various ordering principles: Axis, Symmetry, Hierarchy, Rhythm, Repetition, Transformation, and Balance - symmetrical, radial, occult; harmony; unity; variety; rhythm; emphasis, - scale - proportion -- Golden Section, Le modular, Fibonacci series Renaissance Theories. Figure and ground, positive and negative spaces.

UNIT III CONCEPT OF GEOMETRY & VISUAL COMPOSITION 8 Hrs.

Introduction to different 3-D forms and primitive forms, shapes - characteristic features and their behaviour - understanding the behaviour when combined. Transformation of 2-D to 3-D - process - principles - types - Composition - types - Principles of composition using grids, symmetrical/ asymmetrical, Rule Of Thirds, Centre Of Interest, Gestalt's Theory of Visual Composition.

UNIT IV COLOUR THEORY 6 Hrs.

Introduction colour theory - spectrum of colours - application - concept - Colour wheel – primary, secondary, tertiary colours, colour wheel, colour schemes colour value, intensity, and modification of colour hues – tints, shades, neutralization. Colour charts types, making and using. colour harmony, use of colour harmony. Psychological impact of colour – warm, cool and neutral colours, impact of specific hues, meanings of colour, colour and form, colour and light, colour and surface qualities, colour and distances and scales.

CONSTRUCTIVE ASSIGNMENTS

Review and discussion - articles about famous design examples - Group discussion about interesting design and its impact - Assignment on inspiring designs and various components in terms of elements and principles to be identified, documented and presented. **Max. 30 Hrs.**

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Illustrate different characters and aspects of principle elements and their application in design.
CO2: Recall and translate the identified design vocabulary and ordering principles there by perceiving the visual environment
CO3: Demonstrate the integrated relationship between the different elements, principles and spaces which helps in understanding the design concepts and solutions
CO4: Appreciate the relationship between, space, dimensions, scale, spaces, products and various activities involved.
CO5: Develop the ability to analyse the design problem, synthesize the response and critically evaluate the design by analysing the works of great designers.

TEXT / REFERENCE BOOKS

1. Binggeli, C., Ching, F. D. K. (2012). Interior Design Illustrated. United Kingdom: Wiley.
2. The Handbook of Interior Design. (2015). United Kingdom: Wiley.
3. Linton, H. (2003). Color in Architecture: Design Methods for Buildings, Interiors, and Urban Spaces. United Kingdom: McGraw-Hill.
4. Poore, J., Ragan, S. L. (1994). Interior Color by Design: A Design Tool for Architects, Interior Designers, and Homeowners. Hong Kong: Rockport Publishers.
5. Whiton, S. (2013). Elements Of Interior Design And Decoration. United Kingdom: Read Books Limited.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB1103	SOCIETY CULTURE AND ENVIRONMENT	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To understand the basic concepts / theories of formation of society, role of architecture in built environment and the relationship between man and the environment.
- To construct knowledge on the fundamentals of art and its reflection in culture, theories and solutions related to society and culture.
- To familiarize the students with community, various factors influencing various communities in a society and its impact on environment.

UNIT I CULTURE AND SOCIETY **8 Hrs.**

Meaning and Definition of culture, Characteristics and Elements of Culture, Factors Bringing Changes in Culture. Importance of Culture and social identity with reference to various contexts. Evolution of civilization and cultures, groups, society, environment and time, Levels of social organization & the evolution of various social groups over time, human habitat to be related with research on cultural anthropology, ethnography and geographical contexts with examples in different eras.

UNIT II CULTURE, ARTS & CRAFTS (objects and artefacts) **6 Hrs.**

Art - Role of art, art reality, perception, representation categories of art in terms of media and technique, paintings, sculpture, film- basic characteristics and development of each field, aspects of literature, performing arts -theatre, dance, music- understanding through cultural aspects, symbolism and techniques with examples from different cultural contexts.

UNIT III CULTURE AND BUILT ENVIRONMENT **8 Hrs.**

Introduction to history and theory of built forms - Geographical location, politics, religion, materials, construction techniques and vernacular insights with examples in different contexts. Understanding human cultural development, built form and cultural context. Expression of the underlying value systems and relationship with the built form and interior elements.

UNIT IV CONSTRUCTION AND CULTURE **8 Hrs.**

Evolution of forms and spaces during various eras and regions. Relationship between nature, architecture and interior. Architecture and its context, Social and cultural aspects of building practices, Role of intuition, innovation, inventiveness, creativity, ingenuity, expression of power in construction.

CONSTRUCTIVE ASSIGNMENTS

Book Review on Culture, Architecture and design by Amos Rapoport. Assignment on the topic - Aspects influencing the experience and expression - place, people, society, culture, history, tradition, time etc. Document the existing communities that illustrate the current socioeconomic and cultural pattern, and show the impact of socio-cultural change on age and the built environment.

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Familiarize the cultural contexts; interpret the relationship between society, culture and the environment.
CO2: Impart knowledge on the evolution of social groups over time and human habitat related with various context and culture.
CO3: Identify and demonstrate various art forms and their representation during different periods.
CO4: Appraise the relationship of construction with respect to society and their culture.
CO5: Summarize the different cultural context and analyse their relationship with the design of built forms.
CO6: Appraise the traditional theories of space design including Vastushatra and Feng Shui in interior spaces.

TEXT / REFERENCE BOOKS

1. Lewis, Jeff. (2002) Cultural Studies - The Basics. SAGE Publications.
2. Rapoport, A. (2005). Culture, Architecture, and Design. Locke Science Publishing Company.
3. Rapoport, A. (1990). The Meaning of the Built Environment: A Nonverbal Communication Approach. United Kingdom: University of Arizona Press.
4. Stolley, Kathy S. (2005) the Basics of Sociology. London: Greenwood press.
5. James W. Spradley Late, D. W. (2015). Conformity and Conflict: Readings in Cultural Anthropology. Pearson; 15 edition.
6. Rapoport, A. (1969). House Form and Culture. Pearson; 1 edition.
7. Saile, D. G. (1986). Architecture in Cultural Change: Essays in Built Form and Culture Research. University of Kansas.
8. Hasnain N., (2011), Indian Anthropology.

END SEMESTER EXAMINATION QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions from each unit, each carrying 5 marks : 08 x 05 = 40 Marks.
PART B: 2 questions from each unit with an internal choice, each carrying 15 marks. : 04 x 15 = 60 Marks.

SDEB1104	CRAFTS AND DESIGNERS	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To understand the definition and scope of Design and Craft & Technology
- To document and disseminate the role of Craft & Technology in design through literature; best studies and case studies
- To create awareness and exposure for skill-based knowledge systems and the link between tradition and continuity
- To evaluate various craft typologies and understand the role of craftsperson and designer collaborations

UNIT I CRAFTS SYSTEM DEFINITION AND UNDERSTANDING 8 Hrs.

Introduction, Definition and Understanding of Craft, Handicrafts and Building Crafts, Craft & technology- applications and it's relation to Design, Craft Elements and Craft Clusters - Studies related to the Craft Sector, Issues and Challenges, Policies and Reforms, Case studies of various regions in India, Miscellaneous Case Studies of Indigenous building crafts, Continuity and revival.

UNIT II SKILL AND KNOWLEDGE 8 Hrs.

An introduction to Documenting Knowledge and Skills, Traditional Knowledge Systems and skills of the communities, Indigenous materials tools and techniques, Space Making Crafts & Surface Narrative Crafts, Preserving and revitalising the symbols of cultural heritage - Introduction to SMC - Crafts and built form - Different elements where they can be integrated- construction, doors, windows, flooring, furniture, surfaces, etc. Materials associated with SMC- Bamboo, Earth, Glass, Metal, Stone, Wood | Production Processes.

UNIT III CONTEXT AND COMMUNITIES 6 Hrs.

Significance of Space making Craft from environmental, socio-cultural, emotional and resource conditions of the context it represents. Lifestyle of user and intention of the maker - Craft Mapping of Different regions - Crafts integrated within day to day routine - Examples- Bhunga house, Gujarat; Bamboo house, NE India; Kath Kuni house, Himachal Pradesh.

UNIT IV CONTEMPORARY CRAFTS 6 Hrs.

Reimagining crafts in contemporary times, Studio Based Crafts, Challenges for artisans, Craftsman/Designer collaborations- Process-based, product-based, technology-based, management-based - Craft Designer collaborations - Emerging modes of practice.Examples of Work - Raas, Jodhpur- Ambrish Arora - Nrityagram, Bangalore- Gerard Da Cunha - Athithi Griha, Auroville- Dharmesh Jadeja - Shaam-e-sarhad, Kutch- Hunnarshala Foundation - India House, Pune- Christopher Benninger - Manualaya Resort- Sameep Padora -Dasavatara Hotel, Tirupati- SJK Architects etc.

CONSTRUCTIVE ASSIGNMENTS

Mapping Crafts and techniques from different regions. Creating visual plates for Craft based on particular material or technique. - Analysing craft communities and craft routine lifestyle connections.

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Understand the meaning of 'Craft' and the breadth of its definition and how crafts play a role in Interior Design
CO2: Understand how Craft plays a role in representing the culture and traditions of our country.
CO3: Understand common aspects of craft practices, systems and elements
CO4: Evaluate the various Indian policies for indigenous craft sector
CO5: Understand the contemporary situation w.r.t Indian building crafts
CO6: Give design inputs for the benefit of the targeted craft/cottage industries.

TEXT / REFERENCE BOOKS

1. Ranjan, M. P., Ranjan, A. (2007). Handmade in India. India: Council of Handicraft Development Corporations.
2. Jain. R, (2018) 'Crafts in Interior Architecture: 1990 onwards', Cept University Press
3. Jaitly, J. (1990). The Craft Traditions of India. India: Lustre Press.
4. Saraf, D. N. (1991). D.N. Saraf in the Journey of Craft Development, 1941-1991: Reminiscences. India: Sampark.
5. Risatti, H. (2009). A Theory of Craft: Function and Aesthetic Expression. United Kingdom: ReadHowYouWant.com, Limited.

END SEMESTER EXAMINATION QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions from each unit, each carrying 5 marks : 08 x 05 = 40 Marks.
PART B: 2 questions from each unit with an internal choice, each carrying 15 marks. : 04 x 15 = 60 Marks.

SDEB1105	PERSONALITY DEVELOPMENT AND COMMUNICATION SKILL	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To enhance verbal and non-verbal communication skills
- To improve the skills of reading and writing, language and conversational ability
- To enable and develop skills to express in various mediums such as presentation (written - graphics and audio)
- To enable the student to ultimately explain/defend his/her design to single person or panel.

UNIT I PERSONALITY **8 Hrs.**

Define Personality, Determinants of Personality Development, Perception – Definition, Perceptual Process - Factors of Association – Relationship, Personality Traits, Developing Effective Habits, And Emotional Intelligence - Motivation, Introspection, Self-Assessment, Self-Appraisal & Self-development, Sigmund Freud Id, Ego &Super Ego - Self Esteem and Maslow, Self Esteem & Erik Erikson, Mind Mapping, Competency Mapping & 360 Degree Assessment, Types of Personalities – Introvert, Extrovert & Ambivert person - Spiritual journey beyond the management of change, Good manners & Etiquettes

UNIT II ART OF GOOD COMMUNICATION (BODY LANGUAGE) **8 Hrs.**

Verbal and non-verbal communication - Body language and vocalic - Types of Body Language - Functions of Body Language - Role of Body Language – Voice culture, vocalic and body language - Proxemics - Difference between Oral and Written Communication - 7'Cs of Effective Communication - Importance of Effective Communication - Preparing and presenting verbal explanation on design and concept – Effective Speech - projective positive body language - Design related Articles review – Interview preparation – Dress code – Mock Interview – successful interview

UNIT III WRITING - AN ART OF COMMUNICATION **6 Hrs.**

Writing as a communication skill – elements of written communication - Interpersonal skills - Analytical writing skills - Business writing skills - Technical writing skills - Effective Communication & Its key aspects – Profile – Letter writing – Types – Discussion - Resume Writing

UNIT IV GROOMING AND CONFIDENCE BUILDING **8 Hrs.**

Team Behaviour - Types of Teams - Team Roles and Behaviour - Group Discussion - Do's and Don'ts - Assertiveness, Decision-making skills, Conflict: Process & Resolution, Leadership & Qualities of Successful Leader - Interpersonal Relationship - Attitude – Concept -Significance -Factors affecting attitudes – Positive attitude–Advantages –Negative attitude-Disadvantages -Ways to develop a positive attitude, Carl Jung 's contribution to personality development theory

CONSTRUCTIVE ASSIGNMENTS

Evaluation of individual's writing and presentation skills – Small team building activities – Experimenting presentation skills – power point presentations – group discussions – Debate – Project work – Book review - Articles review and presentation

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Explain about different types of personalities, manners and etiquettes

CO2: Examine the ability to listen and deliver information in a clear and accurate way

CO3: Demonstrate the art of expressing clearly and using language with precision

CO4: Critically appreciate and analyse design, sharpen convincing, oratory skills and develop effective communication

CO5: Formulate effective skills of writing and presentation, with special emphasis on informative (expository) and persuasive (argumentative) discourse

TEXT / REFERENCE BOOKS

1. K K Nelson, F Dubors, Learning to learn, Allyn & Bacon
2. E. H. McGrath, Basic Managerial Skills for all, Prentice hall of India
3. P D Kulkarni & B B Sharma, Independent Study Techniques, TTTI, Chandigarh
4. Malvika Nagarkar, Communication Skills, MSBTE
5. Wren & Martin, English Grammar, Chand Books
6. Burgoon Michael, Human Communication, London: Sage Pub.
7. G Leech & Jan Svartvik, A Communicative grammar of English, ELBS
8. R K Bansal & J B Harrison, Spoken English for India, New York: Mcgraw Hill
9. J D O'Conner, Better English Pronunciation, N Delhi: Orient Longman
10. Technical Communication : A Reader Centered Approach, by Anderson, Thomson Learning.

END SEMESTER EXAMINATION QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions from each unit, each carrying 5 marks : 08 x 05 = 40 Marks.

PART B: 2 questions from each unit with an internal choice, each carrying 15 marks. : 04 x 15 = 60 Marks.

SDEB2105	GRAPHICS	L	T	P	Credits	Marks
		1	0	4	3	200

COURSE OBJECTIVES

- To outline the basic principles of drafting and rendering techniques
- To understand plane and solid geometry, isometric and axonometric view
- To familiarize basic principles of perspective drawing and sciography
- To develop the skill required for constructing a complete rendered three-dimensional simple forms.

MODULE I INTRODUCTION TO FREE HAND DRAWING 12 Hrs.

Basic exercises, Construction of lines, line value, line types, Basic rendering techniques, basics of sheet presentation drawing, drawing instruments, sheet layout. Use of scale, free hand and geometric construction of Lines, Still life, Basic forms, effect of lines to represent textures - Understanding of different types of perspective views using vanishing points, shading exercises etc.

MODULE II GEOMETRICAL DRAWING 16 Hrs.

Construction of shapes - angles, circles, tangents. Construction of Plane Curves: Ellipse, Parabola and Hyperbola. Principles of orthographic projections, Construction and multi view projection of - Points, lines, square, rectangle, polygon, etc. - Multi- view projection of solids – cube, prism, pyramids, cones, cylinders etc.; Sections of solids, true shape of solids.- Plan, elevation and section of simple solids like cube, prism, pyramids, cones etc. Isometric and Axonometric projection of planes, solids and combination of solid etc. Isometric and Axonometric projection of simple objects etc.

MODULE III PERSPECTIVE AND SCIOGRAPHY 18 Hrs.

Study of concepts, types and terminologies such as picture plane, station point, vanishing point, eye level, ground level, Horizon etc. Technical construction of one point, two point and three-point perspective drawings through exercises on simple objects like cube, prism, combination of shapes and views at various eye levels. - Adding figures, trees, furniture etc., shade and shadows - Principles of shade and shadow- construction of shadow of simple geometrical shapes - point, line and planes. Construction of Sciography on small objects and elements.

MODULE IV SKETCHING AND RENDERING 14 Hrs.

Outdoor sketching including Lawns, bushes, Water Bodies, Plants & trees in different media. Indoor sketching furnitures, lights, corridor, lobby, class room etc - Techniques of rendering for various drawings - Colour Pencils Rendering, Watercolor Rendering, Pen & Ink Rendering, Marker Rendering Techniques, Using Mixed Media Rendering Techniques - Plans, site plan, elevations, views etc.,

Max. 60 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Understand the concepts and fundamentals of architectural drawing. .
CO2: Develop representation skills and to generate geometrical forms and its projections.
CO3: Ability to represent various solids and its sectional projection.
CO4: Measure real objects and represent them graphically.
CO5: Create three-dimensional solids and combination of solids
CO6: Develop graphical skill to represent real time objects.

TEXT / REFERENCE BOOKS

1. Gilliatt, M. (2005). Mary Gilliatt's Interior Design Course. United Kingdom: Conran Octopus.
2. Binggeli, C., Ching, F. D. K. (2012). Interior Design Illustrated. United Kingdom: Wiley.
3. Egan, M. D. (1983). Concepts in Architectural Lighting. United Kingdom: McGraw-Hill.
4. The Handbook of Interior Architecture and Design. (2013). United Kingdom: Bloomsbury Publishing.
5. Kopec, D. A., Kopec, D. (2006). Environmental Psychology for Design. United Kingdom: Bloomsbury Academic.
6. Drawing A creative Process, Francis D.K. Ching, John Wiley Sons, New York
7. How to paint & draw, Bodo W.Jaxtheimer, Thames & Hudson, London
8. Geometrical drawing for art students, 2nd revised edition - I.H.Morris, Orient Longman, Calcutta, 1995.
9. Architectural drafting and design, 4th edition Ernest R. Weidhaas, Allyn and Bacon, Boston, 1981
10.. Building drawing, 3rd edition M G Shah, C M Kale, Tata Mcgraw Hill publishing, New Delhi.

SDEB2106	BASIC DESIGN AND CRAFTS STUDIO	L	T	P	EL	Credits	Marks
		2	0	13	2	10	400

COURSE OBJECTIVES

- To provide students with a foundation in design through the comprehension of elements and principles of composition;
- To develop visual representation and modelling of 2D & 3D art and craft forms using different media;
- To introduce students to ideas and techniques of creative thinking and communication;
- To investigate the properties and appropriate use of materials for visual representation.

MODULE I **30 Hrs.**

Exploring the interrelationship between part and the whole- Gestalt principles depicting everyday objects | Shapes - Developing geometric and organic shapes and compositions | Texture - the study of textures - stimulating human senses | Colour- symbolism using colour- Expressing the psychological and physiological effect of colour, Effect of Colour in Form, Emotional Response to Colour – Various colour schemes and its application. Expressing works using narrative

MODULE II **40 Hrs.**

Transformation of form and shape using Compositional principles & Proportioning systems | Modelling Classical orders, Representing Golden Section & Types of proportions | Communicative, expressive & functional 3-D modelling | Subtractive (soap, a plaster block, polystyrene), Constructional (Cardboard with slots or glue, wire bent and looped, wood with nails, joints or curtain wire hooks, cloth sections stuffed and stitched together), and Additive (clay, plasticine, plaster, paper mache) modelling techniques to form an expressive figure or design

MODULE III **30 Hrs.**

Exploring cutting and folding techniques for origami and kirigami to form 3-D forms | 2D to 3D- Creating layered patterns from nature & surroundings, Creating a layered cut-out light box from a real sketch/photograph, Creating a pop out card | Creating paper based forms from music tones and dance poses | Light and shade for 3 dimensionality | Slicing 2d shapes to form organic 3-D forms.

MODULE IV **30 Hrs.**

Designing of a life size expressive art installation in an interior space on campus considering the context and functionality of the space.

Max. 130 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Apply art and design elements to their work
CO2: Generate ideas from imagination, memory and direct observation
CO3: Use drawing for observation, recording and analysis, as a means of thinking and for communication and expression
CO4: Create expressive sculptures using Subtractive, Constructional and Additive modelling techniques.
CO5: Develop skills for understanding and creating 3 dimensional depth using 2 dimensional media
CO6: Devise a narrative approach to their art work

TEXT / REFERENCE BOOKS

1. John W.Mills (1966). The Technique of Sculpture, B.T.Batsford Limited, New York - Reinhold Publishing Corporation, London.
2. C.LawrenceBunchy. (1972). Acrylic for Sculpture and Design, New York
3. Ching, F. D. K. (2014). Architecture: Form, Space, and Order. Germany: Wiley.
4. Jones, J. C. (1992). Design Methods. United Kingdom: Wiley.
5. Lawson, B. (2005). How Designers Think. (n.p.): Taylor & Francis.
6. Ching, F. D. K., Juroszek, S. P. (2019). Design Drawing. United States: Wiley.
7. Pipes, A. (2003). Foundations of Art and Design. United Kingdom: Laurence King.
8. White, A. W. (2011). The Elements of Graphic Design. United Kingdom: Allworth.

SDEB1201	PSYCHOLOGY OF DESIGN	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To understand the autonomous responses of human mind to design based actions / choices.
- To understand the various basis of the subconscious responses of human mind towards certain design contexts
- To be conscious of the significance and role of ambiguity in such complex psychological response scenarios and how the design process can adapt to those.

UNIT I HUMAN SIDE OF DESIGN – EMOTIONS AND PERCEPTIONS 8 Hrs.

Role of psychology and physiology. The 4 c's of design, earlier origins of human scale in everyday contexts, Brief understanding of human relations and psychology, Humans as participants in a co-design process.

UNITII COGNITIVE AND INTUITIVE SIDE OF DESIGN 8 Hrs.

Sensation and perception, Human information processing and execution, Elements of learning, Learning theories of behaviourism, Cognitivism, constructivism. Piaget's developmental theory. Ergonomics, Cognitive Systems and beyond , Vision and Perception, Cognition , Information processing approach, Attention and memory, Lapses in attention and memory, Types of memory, Human decision making.

UNIT III ENVIRONMENTAL PSYCHOLOGY 6 Hrs.

Complexity and systems: dynamism, complexity, uncertainty, Uncertainty as a fundamental challenge in human performance; coping with the unexpected, Dynamic Challenges in large-scale systems not typically present in simple systems, Challenges of human behaviour in large scale systems, complex inter linkages with technology., Human errors in complex systems

UNIT IV PERCEPTION AND THINKING 8 Hrs.

Perceptual processing, Role of attention in perception, Perceptual organization, Perceptual sets, Perceptual constancies, depth perception, distance and movement; Illusions - Thinking and Language: mental imagery, concepts, decision making; nature of language, language development - Learning and Motivation: Principles and applications of Classical conditioning, operant conditioning, and observational learning; Learning strategies; Learning in a digital world; Self-regulated learning; Perspectives on motivation, types of motivation, motivational conflicts.

CONSTRUCTIVE EXERCISES

Applying the theories learnt above in exercises that help in processing them and achieving clarity.

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Familiarise with the human minds working and response pattern to certain broad scenarios of design

CO2: Distinguish the facets and depths of human psychology that are autonomous and what physical attributes are directly influencing the mind

CO3: Identify the various complexities in a broader context of design responses and the various exceptions

CO4: Compare and interpret the multiple systems that work behind in understanding human behavioural responses to various design decisions.

CO5: Interpret the learning in real time design performances and how to authenticate them or validate them.

TEXT / REFERENCE BOOKS

1. Alex W. White, The Elements of Graphic Design: Second Edition Paperback – 15 March 2011
2. Rajeev Batra (Editor), Colleen Seifert (Editor), Diann Brei (Editor), The Psychology of Design: Creating Consumer Appeal 1st Edition
3. Susan M. Weinschenk "100 Things Every Designer Needs to Know about People"
4. Nir Eyal,Hooked: How to Build Habit-Forming Products
5. Robert Cialdini, Influence: The Psychology of Persuasion.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB1202	ANTHROPOMETRICS AND ERGONOMICS	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To understand a space with respect to human body dimensions, recognizing the functional aspect and imparting them in designing a spaces/ furniture/products.
- To understand detail working drawing for construction of the furniture, products for various functions and activities.
- To identify the purposes of understanding human physical variation, and develop design solutions.

UNIT I INTRODUCTION TO ANTHROPOMETRICS AND ERGONOMICS 8 Hrs.

Introduction to Anthropometry, Types of Anthropometric Data-Static and Dynamic Anthropometric data necessary to design. Anthropometric considerations in design development. Introduction to Ergonomics, Need for study of anthropometric and ergonomics. Meaning of Ergonomics, Concept, objectives, Applications, Ergonomic Factors Applicable to design. Ergonomics for various static activities (Seated, standing, sleeping, etc).

UNIT II ANTHROPOMETRICS AND ERGONOMICS – IN PRIVATE SPACES 8 Hrs.

Space requirements and their dimensions in residential space. Space requirements and allocation in various rooms. Dimensions of various fixtures. Space requirements in Toilets, powder rooms, bathrooms. Ergonomics in Kitchens: Ergonomic working triangle. Different work counters in Kitchens. Types of kitchen - Determination of work surface height, depth, Comfortable work chair height. Standard Furniture dimensions. Furniture used and space requirements in residential spaces with dimensions.

UNIT III ANTHROPOMETRICS AND ERGONOMICS – IN PUBLIC SPACES 8 Hrs.

Space requirements in office spaces: reception areas, office work counters, conference rooms. Space requirements in Restaurants: Space allocation in Alcove configuration, Parallel configuration, and Diagonal configuration. Space requirements for public washrooms with universal access.

UNIT IV ANTHROPOMETRICS AND ERGONOMICS FOR SPECIAL NEEDS 6 Hrs.

Ergonomic Factors &. Anthropometries Data, Circulation, Work Surfaces for Different Functions, Arrangement & Clearances, Door Width, Kitchen Counter Height, Counter Width, Furniture, materials finish suggested for them & their Details. Facilities Provided in Recreational Areas, Public Areas Etc.- Activity and behaviour based measurements and its importance in developing various designs

CONSTRUCTIVE ASSIGNMENTS

Representation of anthropometric measurements: vertical and horizontal reach. Various human postures with dimensions: standing, sitting, cross legged, crawling, reclining, sleeping - Drawings and sketching of different postures with respect to various activities - Representation techniques -Sketching, Drawings, drafting and rendering- Measuring of various furniture and spaces, its relationship with human postures.

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Explain the role of measurements and proportions of human body and its importance for our everyday lifestyle.

CO2: Analyse the various approaches to Product and accessories design for different purposes.

CO3: Apply various human factors in design of spaces, products and accessories.

CO4: Construct and communicate various possibilities towards design of products and spaces incorporating safety, health and other standards.

CO5: Design and develop different design solutions which are aesthetically pleasing without compromising the comforts of individuals and their choices.

TEXT / REFERENCE BOOKS

1.Joseph De Chiara et.al., Time Saver Standards for Building Types, McGraw Hill International, Singapore, 3rded., Singapore,1995.
2.Joseph De Chiara et.al., Time Saver Standards for Housing & Residential Development, McGraw Hill International Singapore, 3rded. 1995
3.Ernst and Peter Neufert, Neufert Architects Data, Wiley Blackwell, 4th Edition, 2012
4.William Lidwell, Kritina Holden, Jill Butler ,Universal principles of Design, Rockport
5.CPWD Guidelines for Space Standards for Barrier Free Built Environment for Disabled & Elderly Persons, CPWD, New Delhi

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB1203	MATERIALS AND FINISHES	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To understand the physical features, properties, application of materials in different spaces, accessories and products.
- To construct knowledge on the fundamentals of different finishes.
- To familiarize various theories and design solutions based on functional and aesthetic properties of wide range of materials.

UNIT I NATURAL MATERIALS AND ITS APPLICATION **8 Hrs.**

Introduction to various natural materials - products, accessories and interior spaces – properties – characteristic features – Definition - scope and importance – impact on environment – process involved in manufacturing various products, accessories and interior application – public awareness - Evolution of products and other applications – bamboo, cane – properties – process – application – stones - Igneous, metamorphic & sedimentary – classifications, types – properties –availability – applications – advantages – Wood – properties – seasoning – raw materials – products – advantages – applications - Material and workmanship, specifications– technology- innovation in developing new products, accessories etc.

UNIT II TERRACOTTA, CERAMICS AND GLASS **8 Hrs.**

Terracotta art , craft, origin – application – process - properties and application – ceramic – definition – traditional ceramics – earthenware, stoneware, porcelain – history – evolution – properties – process – application as products and in interior spaces – accessories – mosaic – mosaic art – products - Glass and glass products – Composition and fabrication of glass, classification, all types of glass annealed, float, mirrored, tinted, stained, etc. – including wired glass, fiberglass, laminated glass, glass blocks, etc. - their properties and uses - commercial forms available – their physical and behavioural properties.- Application of glass: tools and technology of its application in spaces, accessories, products etc. Material and workmanship, specifications.

UNIT III NATURAL AND SYNTHETIC RUBBERS, PLASTICS **6 Hrs.**

Rubber – Natural rubber, latex, coagulation, vulcanizing and synthetic rubber properties - and application – general rubber – special rubber - Plastics – Types, thermosetting and thermo plastics, resins, common types of moldings, fabrication of plastics, polymerization and condensation. Plastic coatings reinforced plastic, plastic laminates, accessories, commercial plastics – properties, uses and applications-advantages and disadvantages – composite materials – Linoleum, PVC and PVA flooring, accessories, products their properties, other uses and applications - Material and workmanship, specifications.

UNIT IV METALS, HARDWARE, RESINS AND ADHESIVES **8 Hrs.**

Metals – definition –types - workability – manufacturing process – properties – advantages – its application – coating and finishes – metallic finishes – its process – combination of metal with other materials for spaces and products – innovation and role of technology in innovative products and designs – hardware, accessories and basic tools required for designing small products and accessories – fittings – basic profiles etc. – resin a raw material for various products – its workability – methods and designs – aesthetic component - different resin products – process- properties – advantages- disadvantages. Adhesives -Natural and Synthetic, their varieties, thermoplastic and thermosetting adhesives, epoxy resin. Method of application, bond strength etc.

CONSTRUCTIVE ASSIGNMENTS

Material exploration through site visits – product information collection visiting expos and vendors – Simple assignments to review existing products, analysing the pros and cons of the products – reviewing works of famous, influential designers their designs, products.

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Familiarize different materials its properties, uses, advantages and disadvantages.
CO2: Impart knowledge on the evolution of various materials over time and role of technology in the evolution of the products.
CO3: Identify and document various process in developing designs, products and their applications.
CO4: Summarize and elucidate the application of different materials and finishes
CO5: Evaluate different components its properties, advantages and disadvantages of various products in terms of their materials and finishes.

TEXT / REFERENCE BOOKS

1. The New Science of Strong Materials (or Why You Don't Fall Through the Floor) by J.E. Gordon. Penguin (various editions). This classic, very readable book explains how and why materials such as wood and metals behave as they do. Part III, The Metallic Tradition (Chapters 9–11), covers metals.
2. Alan N. Gent, ed., Engineering with Rubber, A.C.S. Rubber Division, 1992. A practical introduction and theoretical reference.
3. P. B. Lindley, Engineering design with natural rubber, NR Technical Bulletin, The Malaysian Rubber Producers' Research Association, 1984.
4. Maurice Morton, ed., Rubber Technology, Van Nostrand Reinhold, 3rd ed., 1987. A basic introduction to rubber technology.
5. Harry Long, ed., Basic Compounding and Processing of Rubber, A.C.S. Rubber Division, 1985.
6. James M. Margolis, "Elastomeric Polymers 2000 to 2010: Properties, Processes and Products" Report, 2000.
7. KRATON Polymers and Compounds, Typical Properties Guide, Shell Chemical Company, Houston, Texas, 1997.
8. Products, Properties and Processing for PELLETHANE Thermoplastic Polyurethane Elastomers, Dow Plastics, The Dow Chemical Company Midland, Michigan, ca. 1997.
9. Modern Plastics Encyclopedia '99, McGraw-Hill, New York, 1999, pp. B-51, B-52.
10. Engage, A Product of DuPont Dow Elastomers, Wilmington, Delaware, and December 1998.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks

PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB1204	COMMUNICATING DESIGN	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To understand the process of communication and to develop ways of integrating narrative with design ideas
- To recognize the importance of storytelling and integrate it in design process
- To examine various methods of visual representation of spatial design using various visual principles
- To create convincing design project presentations using visual elements.

UNIT I DESIGN PRESENTATION **6 Hrs.**

Process of Communication- Verbal, Text-based Visual representation of design. Types of users to which representation needs to be conveyed- Clients, Designers/Co-Designers, Agencies - Terms and Terminologies used in Interior Design- Elements , Formal vs Informal Communication- strategies for communication.

UNIT II PITCHING AND NARRATIVE **8 Hrs.**

Principles of effective storytelling | Imagination and Speculation- Creating scenarios - sales pitch- Preparing a convincing proposal - Context- Emotional, Environmental, Social - Narrative arc - Communicate their ideology and design process - Elements of a good narrative: facts, situation, characters, plot and resolution of a design project

UNIT III VISUAL LANGUAGE AND DRAWINGS **8 Hrs.**

Visual language in Design- Diagramming- need and types - Graphics within the design process. Presentation dwgs- Isometrics, Perspective - Rendered dwgs, Line dwgs, Shaded dwgs, Walkthroughs -Models Technical dwgs- Wall elevations, Sections, Details/Shop dwgs, Layouts- Site dimensions, Furniture, Partition dismantling & mounting, Reflected ceiling, Lighting & Electrical, Plumbing, Air-conditioning, Flooring Methods of representation within the Interior Design Process- Inspiration, Identification, Conceptualization, Exploration, Modelling, Communication & Production.

UNIT IV DESIGN PRESENTATION **8 Hrs.**

Graphics- Do's and don'ts - Competitions vs academic work - Mood & Material boards -Presentation boards- Construction, Size, Orientation, Colour, Layout, Grids, Typography - Self profiling - Portfolio & Resume of an Interior Designer - Using new and future-oriented technologies.

CONSTRUCTIVE ASSIGNMENTS

Understanding and expressing the design process through representation at different stages of the design process from brief to build- Inspiration, Identification, Conceptualization, Exploration, Modelling, Communication, Production.

Max. 30 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to:

CO1: Explore various types of communication involving various stakeholders of an Interior design project
CO2: Discuss and apply elements of verbal, text-based, and visual communication
CO3: Evaluate elements of a story to incorporate in an interior design presentation
CO4: Recognize steps required for a successful interior design sales pitch
CO5: Distinguish representation of design used within the different stages of the interior design process
CO6: Prepare professional presentations using graphic design principles

TEXT / REFERENCE BOOKS

1. Design is Storytelling, Ellen Upton

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB1205	INTRODUCTION TO DESIGN	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To understand the core need for the process of designers.
- To review the works of famous designers of all fields.
- To get accustomed to the different school of thoughts under the umbrella of design
- To be able to understand the difference and take decisions accordingly in choosing the right design process, based on user / need / premise / expected output, etc..

UNIT I DESIGN – BIRTH, NEED AND ITS INCEPTION **8 Hrs.**

Need for design, Creativity, Satisfying everyday needs / Basics in lifestyle, objects to experiences, Enhancing the existing, Evolution and adaptation and its influence in the rise and boom of designing.

UNIT II INTUITIVE AND HUMAN QUOTIENT OF DESIGN **8 Hrs.**

Human behaviour & experience, Human-technology interaction, Psychometrics, Behaviour change by design, Design ethics, Emotion mapping and designing for well-being, Being a clever consumer of social science, User experience design.

UNIT III DESIGN AS PROCESS **8 Hrs.**

The Rational Model, Technical Problem Solving and the Reason-Centric Perspective. The alternative view has been called Reflection-in-Action, Evolutionary Design, co-evolution, and The Action-Centric Perspective.

UNIT IV DESIGNERS / FORE RUNNERS AND THEIR WORKS **6 Hrs.**

How designers in many fields, produce designs - Dorst and Dijkhuis arguement – Examples of products and experiences as works of designers chronologically and geographically from across the world is familiarised.

CONSTRUCTIVE ASSIGNMENTS

Exercises involving developing simple design solutions for different cases, Case study on human behaviour and recording the output, Case studies on various problem solving techniques and process.

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Explain the basic palette of design outside the premise of the built envelope.
CO2: Familiarize with the various methods tested successfully and survived time
CO3: Deliberate how user and function can dictate the process of design.
CO4: Familiarize with the ability to decide different design process methods and to adopt the suitable method
CO5: Infer and integrate various tools applied in design process.

TEXT / REFERENCE BOOKS

1. Dave Gray, Liminal Thinking, Create the change you want by changing the way you think, 2017
2. Dan Ariely, Payoff: The Hidden Logic That Shapes Our Motivations
3. Richard H.Thaler, The making of Behavioral Economics, Misbehaving
4. Seth Stephens-Davidowitz , Don't Trust Your Gut: Using Data to Get What You Really Want in Life, May 10, 2022
5. Tim Brown,CHANGE BY DESIGN HCINDIA PB, 2012

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**.

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB2205	MODEL MAKING STUDIO	L	T	P	EL	Credits	Marks
		0	2	4	2	4	200

COURSE OBJECTIVES

- To develop an understanding of scope of materials and methods to manipulate them
- To learn the skills of using various tools used in model making
- To broaden a sense of accuracy and precision through manipulating the materials into various meaningful and abstract forms.

MODULE I INTRODUCTION 15 Hrs.

Introduction to concepts of model making | Various styles of models | Materials and tools used for model making | Types of adhesives and their usage | Safety practices | Preparation of base for models using wood or boards | Sketch to Measured drawing to 3D model | Marking and using scale | Practising basics of cutting various types of sheets, making half- cuts for curving and folding flat sheets

MODULE II SURFACES 15 Hrs.

Painting and texture representation of various glossy and matte surface finishes for floor, wall, roof, furniture and fenestration | Brick/stone, Stucco finish, Concrete, Tiles, Marble, Wood, Wallpaper, Carpet, Fabric, Leather, Water, Grass, etc. | Flat vs Curved surfaces.

MODULE III OBJECTS 15 Hrs.

Making detailed scaled model representations of various building elements like Walls, Columns, Steps, Windows/glazing, Sunshades, and Hand rails using materials like Mount/foam board, Snow-white board, cardboard, polystyrene, metal and acrylic sheets. Organic shapes and forms using clay, POP. Representation of landscape- Trees, shrubs, planters, lawn etc. Creating scaled models of various types of furniture and accessories in an interior space like tables, chairs, stools, counters and cabinets.

MODULE IV INSTALLATION ART 15 Hrs.

Making models of the various interior spaces such as • Residences • Offices • Retail Spaces • Recreational Spaces. Exposure to advanced techniques such as laser cutting and etching for models.

Max. 60 Hrs.

COURSE OUTCOME:

On completion of the course the student will be able to:

CO1: Explore the properties of various materials and their appropriate application techniques.
CO2: Select and specify materials for different models based on the its properties and requirements
CO3: Familiarize different tools and techniques used for model making
CO4: Able to develop and design simple objects in different scales based on their application in interior space models
CO5: Have an overview of the various 3D art forms and developing miniature installations for spaces

TEXT / REFERENCE BOOKS

1. Haun, L. (1999). Carpentry. United Kingdom: Taunton Press.
2. Taylor, J. D. (1996). Tools of the Trade: The Art and Craft of Carpentry. United States: Chronicle Books.
3. Jannsen, (1973). Constructional Drawings & Architectural models, Karl Kramer Verlag Stuttgart.
4. Smith W.H., (1982). The art of making furniture in miniature, E.P.Duttor Inc., New York.

SDEB2206	DESIGN PROCESS STUDIO	L	T	P	EL	Credits	Marks
		0	0	12	2	8	400

COURSE OBJECTIVES

- To enable the students to understand the principles of various elements and their role in space.
- To understand the role of transformation of 2-dimensional elements into different forms and products
- To know the importance of spatial qualities and to experiment with the art of spatial arrangement
- To explore and experiment with concepts and themes for different spaces through creative thinking.
- To analyse the functional relationship between a space/form and the user.

MODULE I **30 Hrs.**

Role of various principles and elements of design – application in designing different macro to micro products/spaces – analysing compositions based on elements and principles – application

MODULE II **60 Hrs.**

Concept – theme – context – response to user need – functional units – Anthropometry - Materials, Universal compliance – Small single space, products to complex utilitarian objects. Examples of useful products based on identified issues – are spatial / product-based solutions – small rooms/products for different age groups – redesigning day-to-day products/ spaces based on the user's needs and feedback, etc.

MODULE III **70 Hrs.**

Identifying interdisciplinary design problems – solutions – understanding Interrelationship between spaces – scale – proportion – Mastery of various forms – addressing human needs – environmental sensitivity – Examples like various products/furniture/spaces for public gathering spaces – Designer – his needs – spaces – products – furniture, etc.

Max. 160 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Recollect the knowledge gained in the previous semester and interpret inferences in the design.
CO2: Identify and deliberate the data in a small-scale design project that incorporates functional, technical, psychological, and visual areas of study.
CO3: Appreciate the transformation of ideas through graphical and three-dimensional models
CO4: Evolve design concepts that abide by various standards and confer them to pragmatic design
CO5: Develop and present a single space design project and demonstrate different problem-solving approaches.

TEXT / REFERENCE BOOKS

1. Neufert E, Neufert P, (2012). "Neufert Architect's Data", Wiley Blackwell Publication, UK.
2. DechiaraJ., Panero J., Zelnik M., (2011). "Time Saver Standards for Interior design and Space Planning", McGraw Hill, London.
3. DechiaraJ., Panero J., (2011)"Standards for Interior Design and Space Planning", McGraw Hill Professional.
4. Jones, J. C. (1992). Design Methods. United Kingdom: Wiley.
5. Lawson, B. (2005). How Designers Think. (n.p.): Taylor & Francis.
6. Laseau, P. (2001). Graphic Thinking for Architects and Designers. United Kingdom: Wiley.
7. Weigand, J., Faimon, P. (2004). The Nature of Design. United States: F+W Media.
8. Pipes, A. (2003). Foundations of Art and Design. United Kingdom: Laurence King.

SDEB1301	INTERIOR SPACE PLANNING	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To enable the students to learn the concept of space in interior design.
- To understand the importance of space planning and its impact in design
- To communicate interior design concepts in accurate and professional graphic, oral and written formats

UNIT I INTRODUCTION **8 Hrs.**

Space planning, terms and intent, necessity of space planning, synthesis of space planning, design program - Planning Methodology, Introduction to defining design, evaluating design - function, structure and materials, aesthetics, analysing existing space and its advantages - Space design, data collection, analysis, synthesis -zonal and block diagram, adjacency matrix, criteria matrix, development of a design program - stacking plans, circulation, evaluation, execution, feedback- evaluation- literature study, case study, Prototypical plan sketches, relationship diagram.

UNIT II PROCESS IN PLANNING **8 Hrs.**

Planning steps, Mind mapping, data collection, case study, literature study, Area calculation, bubble &circulation diagram, block diagram, explained using any sample projects. Factors influencing the spatial planning, Building codes, the building shell, plumbing, HVAC, electrical systems, human factors, furniture placement and planning. Steps in Space Planning 20 Hrs Area calculation, bubble & circulation diagram, block diagram, development of a concepts

UNIT III SPACE DEVELOPMENT **6 Hrs.**

Introduction to space development, generate concepts, present preliminaries, Developing a rough floor plan, circulation spaces, construction reality, spatial quality, Basic room allocations, storage, furniture, equipment's. Preparing the complete Design program, Planning steps, Design drawings and documentation

UNIT IV SIGNIFICANCE OF DRAWINGS **8 Hrs.**

Drawings – Types of Drawings – different consultants - Introduction to types of consultants - Acoustical consultant, lighting consultant, plumbing consultant, AC consultant, and special consultant based on project needs - Introduction to construction documents, layout plan, construction plans, telephone, and electrical plans, finishes plans, furniture plans and section details. - Presentation drawing: circulation diagram, block diagram, stack diagram – development of elevations, sections, detailed drawings, 2 dimensional and 3 dimensional views according to design proposal..

CONSTRUCTIVE ASSIGNMENTS

Decode and discuss different design drawings and documentation of a small project Studio Apartment / Retail Showroom - Developing a complete design program for a Café/ small residence/ small office space - Café, a small residence, or a small office space.

Max. 30 Hrs.

COURSE OUTCOMES

CO1: Analyse and solve space planning problems using physical, psychological, and sociological factors that influence client preferences

CO2: Prepare a floor plan and colour board to illustrate residential space planning that incorporates specific needs of a client, and/or special populations.

CO3: Identify & analyse design principles and integrate into spatial compositions.

CO4: Communicate interior design concepts in accurate and professional graphic, oral and written formats.

CO5: Utilize creative visual presentation techniques for communication of design solutions.

TEXT / REFERENCE BOOKS

1. Ching, Francis D.K.; Binggeli, Cork; Interior Design Illustrated; Willey Publications; New York; 2004.
2. Joseph De Chiara, Michael J Crosbie, Time Savers Standards for Building Types, McGraw Hill, Boston Burr Ridge, Dubuque, I A Madison, W I New York, San Francisco.
3. Joseph De Chiara,Julius Perero and Martin Zelnik, Time Saver Standardsfor Interior design and Space Planning, McGraw Hill, New York, San Francisco, Lisbon, London.
4. McGraw, Time saver Standards for Architectural Design Data, Publications, Delhi, 2011.
5. Rao M, Partap; Interior Design (Principles and Practice); Standard Publishers Distributors; Delhi; 2006

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks

PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB1302	HISTORY OF INTERIORS I	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To understand the evolution of different style of interiors through ages.
- To learn and interpret the influence of belief, culture, art and materials in interiors of various time period
- To explore different approaches of art, furniture and interior accessories and its implications during the past.

UNIT I EVOLUTION OF INTERIORS **8 Hrs.**

Prehistoric Cave paintings- Primitive designs and methods used – themes, theory and interpretations of cave paintings- Egyptian era- Themes and principles in early Egyptian period - Elements and materials used in the interiors of Egyptian culture –Greek era- themes, elements and materials used in interiors- Evolution of Greek furniture.

UNIT II EARLY CLASSICAL PERIOD **8 Hrs.**

Introduction to Roman art – interior spaces and furniture in the roman period – Introduction to Byzantine art – influence of byzantine art on interior design- Early Christian era –elements and materials used –interior spaces and the furniture used in the early Christian era.

UNIT III MIDDLE AGES **6 Hrs.**

Romanesque – elements, materials and furniture used in the interiors –characteristics and features in Romanesque style- Gothic style – Characteristics of gothic style and its influences in the interiors –interior spaces and furniture of gothic period.

UNIT IV RENAISSANCE **8 Hrs.**

Introduction to Baroque period – Materials and elements used – Characteristics and interior spaces-Rococo Style- Furniture of Rococo – Renaissance and its regional variations- Characteristics and is influence in the interior designs.

CONSTRUCTIVE ASSIGNMENTS

Case Studies - Evolution of Furniture study - Story Board - Presentation and Seminars - Simple Models to demonstrate style and design elements - Debate.

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Appreciate the art, craft and cultural development through different ages/periods.
CO2: Describe the evolution of the Interior designs since the prehistoric age
CO3: Application of traditional ideas and styles in the interiors of contemporary designs
CO4: Categorize different ideas, styles and materials which can be incorporated in the interior furnishings
CO5: Correlate the design principles, materials, furniture and design elements of the various styles

TEXT / REFERENCE BOOKS

1. Pile, J. F. (2005). A History of Interior Design. United Kingdom: Laurence King.
2. Gilliatt, M. (2005). Mary Gilliatt's Interior Design Course. United Kingdom: Conran Octopus.
3. Whiton, A. S. (1974). Interior Design and Decoration. United Kingdom: Lippincott.
4. Binggeli, C., Ching, F. D. K. (2018). Interior Design Illustrated. United Kingdom: Wiley.
5. Fletcher, B. (1996), A History of Architecture. CBS Publishers & distributors, New Delhi
6. N.J Wiley 2014,A history of interior design Hoboken, John Pile, Judith Gura

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB1303	INTERIOR SERVICES I	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To familiarize students about mandatory services in interiors based on different standards.
- To understand the protective and preventive measure for electrical and fire safety.
- To outline the basic concepts of planning, design, execution of plumbing, electrical services in interior design projects.

UNIT I PLUMBING **4 Hrs.**

Common hand tools used for plumbing and their description and uses, Joints for various types of pipes, Sanitary fitting standards for public conveniences and disabled people; Different types of pipes and accessories for water supply, controlling fixtures like valves, NRV, PRV, taps, etc. Fittings and Choice of materials for piping for Internal & External usage: cast iron, steel, wrought iron, galvanized lead, copper, cement; concrete and asbestos pipes, PVC pipes; Sizes of pipes and taps; residential drainage system house drainage.

UNIT II ELECTRICAL **8 Hrs.**

Single/Three phase supply, Protective devices in electrical installation, ELCB, ISI Specifications, Types of wires, Wiring systems and their choice, planning electrical wiring for building interiors, Main and distribution boards, Power and Lighting distribution in Interiors, Typical Electrical layout for interiors, Primary/Secondary/ Tertiary looping for lighting, Energy saving methods and fixture usages, Remote and sensor control of fixtures in interiors, ECBC recommendations.

UNIT III FIRE SAFETY **8 Hrs.**

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, combined detectors, automatic alarm system, compartmentalization, cross zoning of detectors, Fire extinguishers, Automatic water sprinkler system, water & foam systems, Gas flood extinguishers for critical zones, Fire alarm panel, public address system PAC, monitoring and control using building automation. Fire exits and fire rated materials for wall, doors, windows, other joineries.

UNIT IV SERVICES STUDIO **10 Hrs.**

Preparation of plumbing (water supply & drainage) scheme in SLD format and layout of a single storey building. Working drawing with various fittings and fixtures of water supply and sanitary installations considering anthropometrics. Preparation of electrical distribution and control layout for a single storey building.

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Acquire basic knowledge about different services in buildings and its significance in interior design
CO2: Restate and exhibit an insight toward safety, standards and different codes used for designing various services
CO3: Demonstrate different and appropriate methodologies for installation of services and maintenance of the same
CO4: Prepare schematic and detailed scaled drawing of different layouts for different services
CO5: Discuss various specifications for electrical, fire and sanitary installations

TEXT / REFERENCE BOOKS

1. AFE Wise, JA Swaffied Water, 'Sanitary & Waste Services in buildings', V Edition, Mitchell Publishing, Co. Ltd., 2002.
2. Indian Standard Code of Practice for Water Supply in Buildings, IS: 2065 – 1983.
3. A.K.Mittal, 'Electrical and Mechanical Services in High Rise Building: Design and Estimation Manual', CBS, 2009.
4. Andrew H Buchanan; 'Structural Design for Fire Safety', Wiley, 2001.
5. National Building Code - Bureau of Indian Standards.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB1304	BASIC STRUCTURAL SYSTEMS	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To make the students understand that the basic knowledge of structural system is important as an Interior Designer
- To gain knowledge about various elements used in building construction.
- To learn the importance of different loads acting on the building, its impact and structural properties of materials used in the building.

UNIT I STRUCTURAL SYSTEMS **8 Hrs.**

Introduction to basic structural systems and elements of a built structure - their functions and behaviour. Beams, slabs, columns, walls, foundations. Load bearing structure and framed structure, composite structure. Different types of roof trusses. Simply supported, cantilever and overhanging beams for various loads. Construction of elements like lintels, sunshades, staircases, arches – parts, types, types of columns – RCC, fabricated, built-up brick column, floating column, etc.,

UNIT II STRUCTURAL LOADS **8 Hrs.**

Primary and secondary forces acting on the structures – gravitational force, live load, wind, temperature variation, distribution of loads through the elements of the structural system.

UNIT III STRUCTURAL BEHAVIOUR **6 Hrs.**

Characteristic requirements of a structural design – stress and strains, strength, stiffness and stability - Discussion on factors affecting them and the ways of satisfying these requirements. Study of behavior of structures through models and testing them for given loads

UNIT IV STRUCTURAL PROPERTIES & ELEMENTS **8 Hrs.**

Structural properties of basic materials like masonry, timber, and concrete and steel etc. lightweight space structure, long span structure - structural systems and their layout for a small building. Structural systems for elements of interior spaces and interior services – false ceilings, false flooring, suspended floors & ceilings, etc. Structural system for urban interior spaces – malls, fair grounds, exhibition spaces, etc. Awnings, space frames, etc

CONSTRUCTIVE ASSIGNMENTS

Case study presentation of the various structural systems and elements, of materials learnt for various structural systems and their properties. **Max. 30 Hrs.**

COURSE OUTCOME

On completion of the course the student will be able to

CO1: Identify and discuss about various built elements used in the building construction.
CO2: Differentiate between various loads acting on building.
CO3:Explain the importance of modular systems to achieve volume of work.
CO4: Discuss and differentiate the behavior of buildings during the action of various loads acting on it.
CO5: Differentiate between various structural properties of materials used in the building.

TEXT/REFERNCE BOOKS

1. Rowland J. Mainstone : Development of Structural Form
2 Rangwala : Engineering Materials
3 S.P.Bindra, S.P.Arora, Building Construction
4 B.C. Punmia : Strength of Materials vol - I
REFERENCE BOOKS
1 S.N. Sinha, “Reinforced Concrete Design”, Tata McGraw-Hill, New Delhi 2011.
2 Dr.B.C.Punmia, Reinforced Concrete Structures, Laxmi publication, Delhi, 2004.
3 P.Dayaratnam, “Design of Reinforced Concrete Structures”, Oxford and IBH Publishing Co., 2002.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB2301	MATERIALS AND CONSTRUCTION - I	L	T	P	Credits	Marks
		1	1	3	4	200

COURSE OBJECTIVES

- To have an understanding of the properties and its application of materials such as bamboo, timber, bricks, clay and stones.
- To sensitize the students about the use of various natural materials and its application.
- To involve students in a number of drawing exercises to familiarize number of design and detail of interiors using natural materials such as bamboo, timber, bricks, clay and stones.

MODULE I (THEORY) – BAMBOO AND TIMBER **15 Hrs.**

Market forms of timber, Industrial timber, - Veneers and Veneer Plywoods, Particle board, Hard board, Fibre board, Block board and Lamin boards, Laminates, advantages and Blockboard uses. Bamboo, Cane, coir, coconut thatch, grass, reeds –Properties and its applications in building interiors.

MODULE I (STUDIO) – BAMBOO AND TIMBER **15 Hrs.**

Collection of brochures, Application of timber, industrial timber, bamboo- walls, floors and false ceiling. Application of industrial timber- partition walls and wall panelling. Cane, coir, coconut thatch, grass and reeds- its application in building interiors.

MODULE II (THEORY) – BRICKS, CLAY AND STONE **15 Hrs.**

Characteristics of bricks, Light weight bricks, clay bricks, paving bricks, hollow bricks – terracotta, porcelain, stoneware, earthenware and their uses – Glazed ceramic tiles, Fully vitrified tiles, Ceramic sanitary appliances, Stoneware pipes and fittings. Ceiling materials – tiles, characteristics and its applications.

MODULE II (STUDIO) – BRICKS, CLAY AND STONE **15 Hrs.**

Collection of brochures, Representations of various materials in drawing. Application of bricks, clay and stone in interiors- floors, ceiling and walls- Partition walls, false ceiling, cladding, flooring, floor and wall finishes.

Max. 60 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Acquire basic knowledge about different natural materials and its application in interiors.
CO2: Restate and exhibit an insight towards natural materials its application in different planes of interiors.
CO3: Demonstrate different and appropriate methodologies and tools for using the materials in floor, wall and ceiling planes.
CO4: Critically evaluate and make an assessment of different products and its specifications
CO5: Visualize, design and draft detailed drawings of natural materials and its construction details

TEXT / REFERENCE BOOKS

1.Varghese P.C., “Building Materials”, Prentice Hall of India put Ltd New Delhi, 2005.
2.Dunkelberg (K), “Bambus – Bamboo, Bamboo as a Building Material”, Karl Kramer Verlag Stuttgart, 2000.
3.Duggal S.K., “Building materials”, Oxford and IBH publishing Co, put, Ltd, New Delhi, 1997.
4.Spencke R. F. and Cook D.J., “Building Materials in Developing Countries”, John Wiley and sons 1983.
5.Arora S.P. and Bindra S.P., “Text book of Building Construction”, Dhanpat Rai & Sons, New Delhi, 2012
6.Klans Dukeeberg, Bambus – Bamboo, Karl Kramer Verlag Stuttgart Germany, 2000.

SDEB2305	COMPUTER APPLICATIONS	L	T	P	EL	Credits	Marks
		0	1	4	2	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 I INTRODUCTION TO 2D DRAFTING 15 Hrs.

Understanding on model workspaces –setting up limits – setting drafting units – understanding on drawing tools and objects.. Introduction to scale command – Filter command- Advantages of segregating layers using filter command –Functions of insert command Revision cloud – Detail drawings. paper setting –plot manager – plot styles setting -layout properties –plot manager – plot styles – understanding on ctb files – Introduction to presentation techniques. Preparation of drawings using layouts and viewports. Understanding page setup and Scale in layouts.

UNIT II INTRODUCTION MODIFY AND EDITING COMMANDS 30 Hrs.

Introduction to layers , layer editing -Line type- Line thickness - line weight –Match properties - Draw order – Trim –move –copy – rotate –Block - mirror – array commands –Area calculation - Hatching commands . Introduction setting up annotations – Dimensioning and its properties –match properties - Leader commands. - Introduction to scale command – Filter command- Introduction to Plot Styles and layout settings. Preparation of drawings using layouts and viewports. Understanding page setup and Scale in layouts.

UNIT III INTRODUCTION TO 3D MODELLING 15 Hrs.

Introduction to 3d modelling – Sketch up tool set – understanding on workspace and template settings – unit settings. –Import and export settings. Introduction to drafting tools – Navigation 3d model – accuracy modelling.-Orbit commands –Insight in modelling space.

UNIT IV INTRODUCTION TO MATERIAL EDITOR 30 Hrs.

understanding on material palate – materials editing – define pattern - painting tools and other tools.

UNIT V INTRODUCTION TO PRESENTATION TECHNIQUES 15 Hrs.

Introduction to image editing & plugins – understanding on v-ray – Introduction to render – walkthrough render setting .Introduction to Adobe Photoshop –Introduction to basic tools used for image editing for presentation.

Max. 90 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Achieve proficiency in the basic computer skills relevant in the architectural profession
CO2: Construct 2D orthographic projections in CAD
CO3: Visualize design concepts in-the-round and make simple and complex 3D objects
CO4: Retrieve and present drawings and visualizations appropriately for multiple usages across various platforms
CO5: Develop diagrams and visuals to express architectural ideas and concepts.
CO6: Process images and create photo montages for presentation visualizations.

TEXT / REFERENCE BOOKS

1. Introduction to AutoCAD 360 .Beginners 2020 & 2022
2. Introduction to Trimble Sketch up .Beginners 2020 & 2022
3. Introduction to Adobe Photoshop Beginners 2020 & 2022
4. Introduction to V-ray 2022

SDEB2306	INTERIOR DESIGN STUDIO I	L	T	P	EL	Credits	Marks
		0	0	12	2	8	400

COURSE OBJECTIVES

- The studio aims at integrating the avenues of theory and studio courses questioning more on lateral thinking
- To enhance creative skills and design thinking for their multiple-space design.
- To understand the process of design towards generating alternatives that form the foundation for future design

MODULE I **40 Hrs.**

The primary focus is to master the art of perceiving interior spaces and decoding various attributes that regulate the quality of the space and creating spatial configuration by understanding the human physical, psychological and socio-cultural needs.

MODULE II **60 Hrs.**

Decoding various terminologies involved in different planes such as wall, floor, and ceiling. Critical analysis of different services at different levels and material knowledge for different planes needs to be summarized. The principle and working of design based on various services are chosen and incorporated into the design. Detailed illustration of various supporting facilities to be studied and incorporated in design at the basic level.

MODULE III **80 Hrs.**

Resolving the given Design Program by experimentation and multiple iterations leading to the three-dimensional composition of different spaces and expressing their ideas of space making.

The creation of workable plans and the art of realizing through legible drawings as a medium to communicate the vision. Use of a variety of materials and techniques to represent the design.

Application of the knowledge gained by the students from core courses like Materials and construction, Services, building elements, and principles in developing spatial configurations, detailed drawings, and physical relationships.

Examples like Doctor's clinics, Kindergarten schools, Architect's studios, Small cafeterias, Departmental stores, Anganwadi, Health care in rural areas, etc.

Max. 180 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Interpret the arrangement of spaces that can be unified as a whole in composition allowing one to explain briefly the elements of space.

CO2: Illustrate the interrelationship between humans, society, and environmental factors.

CO3: Resolve design problem through multiple iterations and express different ideas of space-making

CO4: Integrate sensitivity in design approach in community-oriented projects with respect to context, collective value, and needs.

CO5: Resolve, anticipate, communicate and produce design integrating physical and psychological aspects of the user

TEXT / REFERENCE BOOKS

1. Karlen, M. (2009). Space Planning Basics, 3rd ed. John Wiley & Sons
2. DechiaraJ.,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. Panero J., Zelnick M., (1979). Human Dimension & Interior Space: A sourcebook 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.

SDEB1401	CREATIVE THINKING PROCESS AND METHODS	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To introduce "design" as a crucial component of a wider context in the current situation
- To provide a greater grasp of design challenges, solutions, and methods that foster original thought..
- 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 I INTRODUCTION TO DESIGN **8 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 II DESIGN PROBLEMS AND DIRECTIONS **6 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 III 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 Buno. 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 IV 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.

CONSTRUCTIVE ASSIGNMENTS

Review of day today products and design solutions - Exercise on developing simple design solutions for simple issues - group discussion - Literature study of famous and interesting design process and solutions.

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Identify the various categories of design issues and decipher the brief to develop "problem-driven outcomes."
CO2: Analyse, evaluate, and integrate mapping design techniques in different settings.
CO3:.Describe the various artistic methods used in design-related fields.
CO4: Investigate techniques to identify new directions in design thinking.
CO5: Identify various channels to creativity and critically analyse the direction through which the ideas are translated in design domain.

TEXT / REFERENCE BOOKS

1. Alexander C., (1977). Pattern Language, Oxford University Press.
2. De Bone 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.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB1402	HISTORY OF INTERIORS II	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To understand the tradition and culture of various region of India and their adaptation in interiors
- To develop an insight into the evolution of interiors in Chinese, Japanese and Islamic culture.
- To introduce the evolution of interiors in Nordic culture.
- To impart the design practices of the contemporary interiors.

UNITI COLONIAL TO THE BEGINNING OF THE 20th CENTURY **8 Hrs.**

Design principles, materials, furniture and design elements during Colonial, Victorian designs, Arts & Crafts movement, Art Nouveau, Eclectism- tangible and intangible expressions of culture and values.

UNIT II BAUHAUS TO POST WAR MODERNISM **8 Hrs.**

Ideologies of Walter Gropius/ Bauhaus, De Stijl, Mies Van DerRohe, Le Corbusier, Art Deco, Postwar Modernism in interiors, Works and design ideology and their effects on the design movements and interior spaces in residential and public spaces..

UNIT III INDIAN TRADITIONAL DESIGNS **8 Hrs.**

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

UNIT IV NON EUROPEAN TRADITIONS AND SCANDINAVIAN **6 Hrs.**

Interiors in China, Japan & the Islamic World–Influences of Pre-Columbian American art & culture. Principles of Interior Design in Sweden, Finland, Norway works of Aalvar Aalto, Gunnar Asplund, Eero Saarinen.

CONSTRUCTIVE ASSIGNMENTS

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

Max. 30 Hrs.

COURSE OUTCOMES

CO1: Achieve an understanding in the modern movement and its later part of the 20th century.
CO2: Create an exposure to various traditional designs and its influence in the contemporary scenario.
CO3: Provide an insight to the ideologies of the designers followed in the non-European traditions in interior design and decorations.
CO4: Apply the understanding from Historic context in their own design, with a reasonable justification.
CO5: Identify various styles and apply them in the contemporary practices

TEXT / REFERENCE BOOKS

1. Lawson, B. (2001), Language of Space, Architectural Press.
2. Tuan, Y., Hoelscher, S., (2001). Space and Place: The perspective of experience, University of Minnesota Press.
3. Low S., Lawrence D., (2003). Zunigias, Anthropology of Space and place: Locating Culture, Wiley – Blackwell publishers
4. Altman I., Zube E., (1989). Public spaces and places, (Human Behavior and environment), Springer.
5. Downs R., Stea D., Boulding K., (2005). Image and environment, Transaction Publishers.
6. N.J Wiley 2014,A history of interior design Hoboken, John Pile, Judith Gura

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB1403	INTERIOR SERVICES II	L	T	P	EL	Credits	Marks
		2	0	0	1	2	100

COURSE OBJECTIVES

- To familiarize the students with various air - conditioning systems and its applications.
- To acquire the basic knowledge of planning, design, execution of mechanical, fire fighting, acoustical services in interior projects.
- To integrate the mandatory services into the interior design based on needs and standards.

UNIT I AIR CONDITIONING: SYSTEMS AND ITS APPLICATIONS 8 Hrs.

Air conditioning, Functions of Air conditioning, Principles of Air conditioning, purpose of Compressors, Evaporators, Air handling unit, Refrigerant control devices, Various types of air conditioning systems- window AC, split, duct able, central AC and their details. Air distribution systems – ducts, air inlets, dampers and its application. Variable frequency drive (VFD), Variable Air Volume (VAV), Variable refrigerant valve (VRV).

UNIT II FUNDAMENTALS OF ACOUSTICS 4 Hrs.

Fundamentals – sound waves, frequency, wave length, measure of sound, decibel scale, speech and music frequencies. NC curves. Permissible noise limits. Material property - absorption, reflection, scattering, diffusion, transmission. Absorption co-efficient, NRC, Sound Transmission Class (STC), Impact Insulation Class (IIC). Structure borne noise and air borne noise. Reverberation time.

UNIT III ACOUSTICS AND SOUND INSULATION 8 Hrs.

Room acoustics - resonance, reverberation, echo, reverberation time, Optimum reverberation time, and simple exercise using Sabine's formula - Echo- flutter echo and creep echo. Acoustical requirements of different types of building. Sound in enclosed space. Absorbing materials used and their choices, exercises involving reverberation time and absorption co-efficient. Sound insulation materials for floor, wall and ceiling, furniture etc. Basic principles in designing classroom, conference hall, small office spaces, auditorium and recording studio

UNIT IV SERVICES STUDIO 10 Hrs.

Preparation of air conditioning layouts, acoustical insulation details in wall, roof and floor of a building.

Max. 60 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Demonstrate basic knowledge about basics of air conditioning systems and acoustics.
CO2: Distinguish various air distribution systems and their components
CO3: Design and integrate the mechanism of various ducting systems in HVAC
CO4: Critically evaluate and make an assessment of acoustic materials and its performance in interiors
CO5: Construct drawings for wall, floor and ceiling design with acoustical materials along with their specifications

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.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB1404	LIGHT IN INTERIORS	L	T	P	EL	Credits	Marks
		2	0	0	1	2	100

COURSE OBJECTIVES

- To facilitate the students to acquire knowledge about various types of lighting and its characteristic features.
- To help students understand the difference and significance of day and artificial lighting in interiors.
- To familiarize the students and enable them to communicate their design integrating the effect of various lights, colour and texture.
- To outline the basic concepts of planning, design, execution of lighting design and suggesting fixtures in interior design projects.

UNIT I INTRODUCTION TO LIGHTING **8 Hrs.**

Principles of light – Electromagnetic radiation, waves, Visual tasks, Factors affecting visual tasks Units of light, definitions of flux, luminous intensity –utilization factor – depreciation factor- MSCP – MHCP, brightness, glare. Colour temperature and CRI. Factors affecting illumination reflection and transmission and their applications Recommended lux levels for various spaces and activities as per NBC.

UNIT II DAY LIGHTING AND ARTIFICIAL LIGHTING **8 Hrs.**

Importance of lighting, Daylight- day light factor concept, design- sky concept, day lighting requirements –recommended daylight factors for interiors, Importance of lighting, guidelines for good natural lighting (windows, skylights, light shelves etc.). Electric lamps – incandescent, fluorescent, sodium vapour, mercury, halogen, CFL, LED and OLED and neon and mounting methods, lighting cut sheets. Lumen method of design-Glare in artificial lighting - Glare - its types, causes and prevention

UNIT III LIGHTING METHODS AND LUMINAIRES **8 Hrs.**

Lighting Methods - Ambient, Task & Accent lighting; Luminaires- 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. Lighting accessories – Selection of lamps and lighting fixtures, lighting for various areas and specific activities, modern features in lighting design - Economy in lighting - Eco lighting: Introduction, types, materials and application of LED.

UNIT IV LIGHTING DESIGN **6 Hrs.**

Lighting for Office, Residential, Hospital, Restaurants and Hotels. Elementary ideas of special features required and minimum level of illumination for the physically handicapped and elderly in building.

CONSTRCTIVE ASSIGNMENTS

Design of lighting for various spaces like restaurants, hotel lobbies and small offices and develop the RCP for the spaces.

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Illustrate and explain the qualities of natural light and its application in interiors
CO2: Identify the roles of lighting system in interior spaces with varied quality and function
CO3: Prepare lighting layouts for selected spaces with unique scheme and lighting fixtures
CO4: Identify the qualities of light and its behaviour in different context
CO5: Integrate various codes and guidelines for lighting and lighting design.

TEXT / REFERENCE BOOKS

1. Benjamin Evans, "Daylight inArchitecture",McGraw-Hill Book Company, Newyork
2. Pritchard, D.C., "Lighting", Longman Scientific & Technical, Harlow
3. Robbins C.L. (1986) Day lighting Design And Analysis Van No strand Reinhold Co
4. Egan M. David (1983) Concepts In Architectural Lighting Mcgraw Hill Book Company
5. Jankowski Wanda Lighting (1993) PCB International New York
6. Wilhide Elizabeth Lighting (1998) Ryland Peters And Small London
7. Noisewand Nonie Lighting Octopus (1999) Publishing Group London

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB2401	MATERIALS AND CONSTRUCTION - II	L	T	P	Credits	Marks
		1	1	3	4	200

COURSE OBJECTIVES

- To introduce glass, aluminium, plastics and other materials 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.

MODULE I (THEORY) - GLASS AND ALUMINIUM 15 Hrs.

Properties and uses of glass. Types of glass - float glass, cast glass, glass blocks, and foamed glass. Decorative glass, solar control, toughened glass, wired glass, laminated glass, fire-resistant glass, glass blocks, structural glass - properties and application in interiors. Glass – Enrichment – etching, engraving, cutting, enamelling, painting and its uses in interiors. Brief study of aluminium products- market forms of aluminium, aluminium extrusions- sketches of the above

MODULE I (STUDIO) - GLASS AND ALUMINIUM 15 Hrs.

Understanding of product literature and site visits with documentation in the form of sketches/ photos. Drafting exercises on applications of glass- partition walls, flooring and ceiling. Glass block partition wall construction. Aluminium partitions - fixed partitions, false ceiling, and shop front construction methods and details.

MODULE II (THEORY) - PLASTICS AND OTHER MATERIALS 15 Hrs.

Plastics in interiors- polythene, poly propylene, PVC, uPVC, ethylene, polycarbonate, acrylic flooring, PVC tiles and decorative laminates. Teflon coated sheets, PTFE Steel alloys, Plaster of Paris its properties and uses.

MODULE II (STUDIO) - PLASTICS AND OTHER MATERIALS 15 Hrs.

uPVC – full height, half & dwarf, double skinned, single skinned partitions, wall panelling, false ceiling. Floor finishes and ceiling using plastics. False ceiling and partition wall using Plaster of Paris.

Max. 60 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Gain comprehensive knowledge on various types of glass, aluminium and plastics.
CO2: Classify and understand the different materials for interior finishes with functional and aesthetic sense.
CO3: Demonstrate and specify materials based on its properties and intended use.
CO4: Design and specify appropriate false ceiling and wall panelling materials for the design context.
CO5: Comprehend the various types of finishes and the respective maintenance.

TEXT / REFERENCE BOOKS

1. S.C.Rangwala, “Engineering Materials”, Charotar Publishing House, India, 1997.
2. S.K Duggal, “Building Materials”, Oxford and IBM Publishing Co, Pvt. Ltd., 1997.
3. P.C Varghese, “Building Materials”, Prentice Hall of India Pvt. Ltd., New Delhi, 2005
4. Don A.Watson, “Construction Materials and Process”, McGraw Hill Co., 1972.
5. Arthur Lyons, “ Materials for Architects and Builders”, An introduction Arnold, London, 1997.
6. Gorenc, Tinyou, Syam, “ Steel Desinger’s Handbook”, CBS Publishers and Distributors, New Delhi, Bangalore, 2005
7. Ralph Monletta, “Plastics in Architecture” – A guide to acrylic and Polycarbonate, Marcel Dekker Inc, New York, 1989
8. Jack M Landers, “Construction Materials, Methods, Careers”, Good Heart - WilCox Company, Inc Publishers, Homewood, IL, 1983

SDEB2405	CARPENTRY WORKSHOP	L	T	P	EL	Credits	Marks
		0	1	4	2	3	200

COURSE OBJECTIVES

- To focus on the craft of the Furniture –Maker
- To utilizing state of the-industry procedures and equipment
- To emphasize will be on wood and wooden products as a construction medium
- To expose the students to the basic principles of fabrication of furniture, partitions, joinery etc.

MODULE I INTRODUCTION TO WOOD 15 Hrs.

Wood as a building material: Identification, selection, application, types of wood, commercial Classification, nomenclature, structure and natural defects, availability of wood products, wood based panels such as plywood , MDF, HDF, Particle board , pre laminated boards etc . Safe working practices in a workshop.

MODULE II THE BASICS OF FURNITURE CONSTRUCTION & TOOLS 30 Hrs.

Measurement and measurement systems, Preparation for finishing, Furniture Materials Specifying timber finishes etc. Detailed construction drawings & explaining construction and material finishes. Hand tools, portable power tools, Stationary power tools, Materials, Hardware, Preparation of records – collection of furniture designs for different activities, different materials, market survey of furniture.

MODULE III FABRICATION TECHNIQUES 15 Hrs.

Fabrication Techniques involved – planning, chiselling, shaping, fluting, reading, carving, turning, joining, welding, moulding and finishing. Furniture Joinery – Stapling, gluing, screw joinery, nail joinery, Lap, Butt, Dowell, Mortise & Tenon, Dovetail, Edge joints - Wood carving exercises - Study of shapes, forms finishes on furniture - Evaluation of furniture in terms of materials, construction details, design, use, care and maintenance, age group, hours of use, durability and budget.

MODULE IV LIVE SCALE FURNITURE 30 Hrs.

Furniture Construction: Shelves, Chairs, Stools, tables, counters and cabinets. Develop and redesign different types of furniture designs with regard to activity. Finishing constructed pieces- sanding, varnishing, lacquering, painting.

Max. 90 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Recognize timber/wood and wood based panels; apply measuring, marking and testing instruments and other holding and supporting hand tools.

CO2: Operate various hand and power tools to achieve specific shapes and joineries following safety precautions

CO3: Produce joints using materials of specific shape and size by a suitable set of operations and check the accuracy of shape and dimensions using necessary tools

CO4: Demonstrate preservation of wooden items through surface finishing with various processes such as painting, polishing, varnishing etc.

CO5: Plan various techniques such as planning, chiselling, shaping, fluting, reading, carving, turning, joining, welding, moulding required for achieving final design of their products

CO6: Practice skills by designing and making simple projects in wood

TEXT / REFERENCE BOOKS

1. Joints used in wood furniture – ISI – IS 3845 – 1966.
2. Pete Silver et al – Fabrication, the designers guide – Architectural press, London 2006.
3. The Elements of Workshop Technology - Vol I & II, S.K. Hajra Choudhury, A.K. Hajra Choudhury, Nirjhar Roy, 11th edition 2001 others, Media Promoters and Publishers, Mumbai
4. Bawa.H.S., "Workshop Practice", Tata McGraw Hill Publishing Company Limited, 2007.

SDEB2406	INTERIOR DESIGN STUDIO II	L	T	P	EL	Credits	Marks
		0	0	12	2	8	400

COURSE OBJECTIVES

- The studio aims at integrating creative thinking and process and implements the same in interior space design.
- To create a thematic space making with Art and craft forms of our own culture in India
- To introduce students to ideas and techniques of our regional practices and their application in designing unique interior spaces.

MODULE I **30 Hrs.**

The primary focus is to master the art of decoding design thinking process and creating spatial configuration by understanding the human physical, psychological and socio-cultural needs.

MODULE II **40 Hrs.**

Decoding various terminologies and expressions involved in design thinking. Critical analysis as a tool to enable the mind by critiquing the design problem. The core values and principle of design adopted by various designers is studied and interpreted. Design and demonstrate it from a user perspective to solve the given program.

MODULE III **50 Hrs.**

Design of living units of various geographical locations and cultures by involving historical periods. Studying the history of interiors applying the same in a residential unit. Staff can interpret the scale of the unit as a major or minor project. The detailing should incorporate the selected style of interiors inferred from history of interiors.

MODULE IV **80 Hrs.**

Applications of problem solving skills to develop suitable design solutions 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 arcades, and other guest areas with the general theme of the hotel. Special ideas for suites and banquet halls – contemporary interior schemes to integrate traditional concepts in design and materials.

Max. 200 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Outline the characteristic features of interior space, and their relationship with their physical, geographical and socio-cultural factors.

CO2: Illustrate the interrelationship between humans, society, and environmental factors, by stating various elements influencing the spatial design.

CO3: Construct a body of knowledge in the interiors by decoding various design thinking concepts and methods.

CO4: Integrate sensitivity in design approach in community-oriented projects with respect to context, collective value, and needs.

CO5: Resolve, anticipate, communicate and produce design integrating physical and psychological aspects of the user

TEXT / REFERENCE BOOKS

1. Karlen, M. (2009). Space Planning Basics, 3rd ed. John Wiley & Sons
2. DechiaraJ.,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 sourcebook 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.

SDEB1501	VISUAL IDENTITY & BRANDING	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To get an insight into various brands, their position, and history behind those brands.
- To understand relevant strategies, materials, and products designed according to the user's needs.
- To know about the role of lighting, display units, and accessories in commercial interiors.
- To learn about the application aspects of commercial space design processes.

UNIT I BRANDING **8 Hrs.**

Introduction: What is branding - brand management - principles of branding - brand management – terms related to brand and branding (marketing mix, brand, branding, storytelling, etc.) -the evolution of the brand - The summary should briefly describe the brand/organizational values, company/brand heritage and a company/brand Building Iconic brands – brand vision – brand values – brand personality – brands and brand concepts – brand dynamics – brand value.

UNIT II BRANDING PROCESS **6 Hrs.**

Brand Design Process - Introduction to Brand Development Process - Research - Brand Positioning - Target Audience - Connecting with Audience - Constructing Brand Philosophy and Architecture - Brand Naming - Types of Brand names - Characteristics of a good brand name - Brand Identity Design - Forms of Identity design - Brand Management - Expanding the Brand

UNIT III VISUAL IDENTITY **10 Hrs.**

The visual world of a Brand- Graphics, Typography, Colour Palette, Imagery. Sound, Animation, Presentation. Types of Images- Logo, Packaging, Retail Experience, Advertising (Print, Tv, Digital), and Website. The personality of a brand. Types of Brandmarks, Sequence of Cognition, Identity Design process & Branding tools and techniques; Common industry practices. Standards and guidelines, Design of Interiors to reflect Brand Image- Logo, Surfaces, Colour, Material, Furniture & Layout, Lighting, Case Studies

UNIT IV POSITIONING **6 Hrs.**

Exploring Brands and Their Positioning - internationalization of a brand - adaptive marketing - the encounter between global brand and local cultures as well as the consequences of this internationalization for local markets (globalization) - Brand Ideals- Vision, Meaning, Authenticity, Coherence, Flexibility, Commitment, Value, Differentiation, Sustainability, Differentiating types of brand architecture, brand names, and taglines.

CONSTRUCTIVE ASSIGNMENTS

Various Brand Success & Failure Analysis – Specific Example – Famous Brand Group Discussion - Case Study

Max. 30 Hrs

COURSE OUTCOME:

On completion of this course the student will be able to:

CO1: Communicate the difference between a brand and an identity
CO2: Assess the tools and techniques used in the brand identity process to develop brand positioning
CO3: Demonstrate understanding of colour and typographic theory
CO4: Create effective logos and corporate identities
CO5: Showcase best practices in creation of an original visual brand identities
CO6: Categorize the various elements of brand identity through interior space.

TEXT / REFERENCE BOOKS

1. Airey, D. (2019). Identity Designed: The Definitive Guide to Visual Branding. United States: Rockport Publishers.
2. Slade, C. (2016). Creating a Brand Identity: A Guide for Designers. United Kingdom: Laurence King Publishing.
3. Brand Bible: The Complete Guide to Building, Designing and Sustaining Brands- DEBBIE MILLMAN
4. Klanten, R. (2013). Brand Spaces: Branded Architecture and the Future of Retail Design. Germany: Prestel Pub.
   Internet Links-
5. Interbrand: www.interbrand.com
6. Landor: www.landor.com
7. Prophet: www.prophet.com
8. Pentagram: www.pentagram.com
9. IDEO: www.ideo.com
10. Wolff Olins: www.wolffolins.com

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks 04 x 15 = 60 Marks

SDEB1502	ESTIMATION & COSTING IN INTERIORS	L	T	P	EL	Credits	Marks
		2	0	0	1	2	100

COURSE OBJECTIVES

- To have a detailed understanding of the business principles, practices & procedures for Interior Designers.
- To know of the various facets of design formation and management, professional ethics and organizations, certification and licensing issues, design liability, project management, and portfolio development.
- To help the students in the preparation of bill of quantities for estimation and budgeting in construction projects.
- To comprehend the rate for different items of work for costing and valuation of the construction projects.

UNIT I INTRODUCTION TO SPECIFICATION 8 Hrs.

Understand the Specification – Definition, Purpose - Importance of specification of material- Understand the types of specification- General Specifications- Detailed Specifications -Understanding the Principles of writing - Specification. Procedure for writing specification for the purpose of calling tenders. Specification for different item related to various typology in interior design project showing case examples.

UNIT II INTRODUCTION TO ESTIMATION 8 Hrs.

Explore the Estimation –definition, purpose, & its importance -Understanding the various terminologies used in Estimation. Data required to prepare an Estimate -Factors to be considered while preparing -detailed Estimate General rules for taking measurements of various materials. Understanding the Procedure for estimating the cost of work involved in an interior design project.

UNIT III INTRODUCTION TO BoQ 6 Hrs.

Functions of cost planner—liaisons with consultant construction planning technique–relationship between specification and BoQ on ground of cost economics.

UNIT IV COSTING AND TENDER 8 Hrs.

Introduction to costing & value management - Understand the difference between cost, price and value Learn different forms of cost (list out the different forms of costing) item rate, lump sum etc. Finding the Cost of labour -types of labour, standard schedule of rates.- Understanding the Lead statement - the total cost of materials per unit item including first cost, conveyance loading-unloading etc.- Preparation of Unit rates for finished items of words.

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Assemble the written specifications in depth for the materials and labour used in the built environment.

CO2: Create an estimate to anticipate the costs associated with an interior design project

CO3: Examine the methods and technologies that are utilised to monitor or control project costs.

CO4: Compare the rate analyses of various types of work items and the factors that determine a given item's rate.

CO5: Construct the specifications for any projects used in unique situations or with unconventional materials.

TEXT / REFERENCE BOOKS

1. Allison, D. (2014). Estimating and Costing for Interior Designers: A Step-by-Step Workbook. Philippines: Bloomsbury Academic.
2. Rangwala S.C., Rangwala K.S., (1990). Elements of Estimating and costing, Charoter publishing House, Anand, India
3. Kesavan, R. (2004). Process, Planning And Cost Estimation. India: New Age International (P) Limited.
4. Dodsworth, S., Anderson, S. (2015). The Fundamentals of Interior Design. United Kingdom: Bloomsbury Publishing.
5. Riggs R., (1995). Materials and Components of Interior Architecture - 4th Edition, Prentice Hall Professional Technica.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**.

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks : 08 x 05 = 40 Marks

PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks : 04 x 15 = 60 Marks

SDEB1503	CONTEMPORARY INTERIORS	L	T	P	EL	Credits	Marks
		2	0	0	1	2	100

COURSE OBJECTIVES

- To provide the student of Interior Design knowledge on the works of leading designers and their influence on design through ages.
- To understand the works of various contemporary designers of various region
- To introduce the evolution of interiors through different time period
- To impart the design practices of the contemporary interiors.

UNIT I EARLY PIONEERS **6 Hrs.**

Art nouveau, the post-Industrial era works of Charles Renée Mackintosh, Antonio Gaudi, Gerrit Rietveld and their expressionist interior design. Indian colonialism in Interiors, Colonialism & its impact on Indian Interiors, Early British Neo classical style and examples.

UNIT II POST WAR MODERNISTS **8 Hrs.**

Walter Gropius/ Bauhaus, De Stijl, Mies Van Der Rohe, Art Deco, Postwar Modernism. Interiors of Le Corbusier, Frank Llyod Wright, Louis Khan, Kenzo Tange and Oscar Niemeyer.

UNIT III INTERNATIONAL STYLE **6 Hrs.**

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

UNIT IV POST MODERNISM **6 Hrs.**

Emergence of Post modernism in Interior Design; Hi-Tech, Eclecticism, Revivalism, Ornamentalism, Contextualism; Interiors of Zaha Hadid, Santiago Calatrava, Frank Gehry and Peter Eisenmann. Alessandro Mendini and Ettore Sottass..

CONSTRUCTIVE ASSIGNMENTS **4 Hrs.**

Demonstrate comprehensive understanding through accompanying assignments, group discussions, and book / review of works of great designers.

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Study and explore various works of great designers during different periods.
CO2: Understand various styles and techniques of pioneers and draw inferences.
CO3: Analyse concepts and application of different elements and principles of design through the lenses of designers.
CO4: Review and infer from works of international Architects and designers to understand contemporary style in interiors
CO5: Apply design principles and style in interior spaces integrating contemporary style developed through ages.

TEXT / REFERENCE BOOKS

1. Rybczynski, W., (1987). Home: A Short History of an Idea, Penguin Books
2. Jencks, C., Gura, J. (2017). Postmodern Design Complete. United Kingdom: Thames & Hudson.
3. Kristal, M. (2010). Re:crafted: Interpretations of Craft in Contemporary Architecture and Interiors. United States: Monacelli Press.
4. Wilhide, E and Cope stick, I. (2000) contemporary decorating, Conron octopus Ltd., London.
5. Vranckx, B. (2007). Modern Interiors DesignSource. United Kingdom: HarperCollins.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**.

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks 04 x 15 = 60 Marks

SDEB1504	SUSTAINABLE PRACTICES IN INTERIOR DESIGN	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To sensitize students to understand the importance of sustainable interiors
- To study the various factors involved in sustainable interiors
- To understand functional approaches in designing sustainable and energy efficient interiors

UNIT I INTRODUCTION TO SUSTAINBALE INTERIORS **6 Hrs.**

Concept and Principles of Sustainable Interiors. Develop awareness and familiarity with sustainable design and its integration with Interior Design

UNIT II ENERGY EFFICIENT INTERIOR SERVICES **8 Hrs.**

Ventilation – Definition, importance, Types of ventilation – Natural and mechanical and its Guidelines . Eco lighting - Introduction, types, materials and application of efficient fixture for lighting design. Energy efficient Plumbing Fixtures and systems. Role of green Rating System in interior services.

UNIT III SUSTAINABLE MATERIALS,FINISHES AND RATING SYSTEMS **8 Hrs.**

Study of sustainable materials available and its application in the building interiors. Installation, Maintenance and replacement costs. Plywood, Cork. MDF, Melamine. Cleaning, repair and maintenance costs, Prevention of damage, checking strategies through material selection and design. Certification systems and certification authority-IGBC, GRIHA, LEED, BEE with respect material resource.

UNIT IV CASE STUDIES **8 Hrs.**

Study of existing case studies of green interiors, adapting the principles of sustainable designs to interior projects, involving market survey, user reviews and experts opinion. Detail study of techniques, methods and limitations involved in designing green spaces, using renewable energy

CONSTRUCTIVE ASSIGNMENTS **4 Hrs.**

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

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Explore various design strategies and technologies to help control the quality of interior environment
CO2: Gain knowledge about the various types of heating and cooling systems that consume less energy
CO3: Classify the various low energy materials used in interior construction
CO4: Review the various rating and certification systems for sustainable design
CO5: Analyse sustainable design principles and techniques used in various green space case studies.

TEXT / REFERENCE BOOKS

1.Abbaszadeh, S, L. Zagreus, D. Lehrer, and C. Huizenga, (2006) “Occupant Satisfaction with Indoor Environmental Quality in Green Buildings”, University of California, Berkeley, Center for the Built Environment.
2.Miles Keeping, David Shiers, (2017) “Sustainable Building Design: Principles and Practice”, WileyBlackwell, 1st edition
3.Susan M Winchip, (2011) “Sustainable Design for Interior Environment”, Fairchild Publication, 2nd revised edition
4.DeChiara, Joseph, Panero, Julius and Zelnik, Marting, (2001) Time-saver Standards for Interior Design and Space Planning. McGraw-Hill, New York.
5. Karlen, M. (2009). Space Planning Basics, 3rd ed. John Wiley & Sons
6.Hendler, M. (1981). Room and Furniture Layout Kit. Dover Publications.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**.

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks : 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks : 04 x 15 = 60 Marks

SDEB2505	WORKING DRAWING STUDIO	L	T	P	EL	Credits	Marks
		1	0	5	2	4	200

COURSE OBJECTIVES

- To outline the basic concepts for the preparation of working drawing for the residential projects
- To familiarize the students to integrate the services in working drawings and to analyse the service clash and prepare coordinated interior drawings.
- To read and reproduce different layouts and construction detail drawings in suitable scale

MOUDLE I (THEORY) - INTRODUCTION 12 Hrs.

Working drawing - Introduction, concept of working drawings, its needs and importance. Drawing and drafting of plan, development of elevation, details of all drawings, lettering, dimensioning symbols, working drawing of ground, first floor and terrace and sections

MOUDLE II (THEORY) – BUILT IN AND LOOSE FURNITURE 12 Hrs.

Framing project requirements, thematic approach for efficient layout, working triangle, Inbuilt and loose furniture design, cabinet design, accessories selection, colour palette and material selection, types of work tops, stone, quartz, Corian tops, water supply & drainage arrangements, gas distribution arrangement, general and task lighting in counter area. Task

MOUDLE III (THEORY) – PLUMBING AND ELECTRICAL DRAWING 12 Hrs.

Introduction to plumbing drawings – Schematic drawing, bathroom fittings, drainage pattern, pumping & booster pump systems. Preparation of plumbing layout for 2BHK house, Introduction to electrical drawings - Symbols of fan, switch, sockets, bulb, two way switch, geyser, main board, meter, MCB. Electrical looping and layout. Preparation of electrical drawings for 2 BHK house, Load calculation for the 2 BHK house and determination of power and lighting load.

MOUDLE IV (THEORY) – WORKING DRAWING FOR VARIOUS ROOMS 12 Hrs.

Working drawing and details of bedroom / kitchen / living room / kid's room and toilet with all details and facilities including fixed and loose furniture, electrical and plumbing layout. Service integrated reflected false ceiling layout.

Max. 60 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Discuss various concepts related to working drawing including the drawing standards and various other requirements
CO2: Critically evaluate and study working drawing requirements for the built space, inbuilt and loose furniture
CO3: Analyse various standards required for the space, furniture and working ergonomics in the interior space
CO4: Integrate the various trade working drawing for the clash detection and analysis
CO5: Examine and evaluate the application of working drawing in various trade packages in interior design projects.

TEXT / REFERENCE BOOKS

1. Architectural working drawingsBy Ralph W. Liebing · 1999
2. Working drawings handbook by Keith styles and Andrew bichard, fourth edition 2004
3. Space planning for commercial and residential interiors by Sam gubba Mc Graw Hill publication 2003.
4. Working drawings handbook by Larry D. Jenks Published by the JNX Group, LLC, Denver, Colorado 2007.

SDEB2505	INTERIOR DESIGN STUDIO - III	L	T	P	EL	Credits	Marks
		0	0	14	2	9	400

COURSE OBJECTIVES

- The studio aims at demonstrating how the interior spaces, design elements, and principles interact with one another.
- To create a responsive interior space design that responds to and enhances the relationship between the space and the people
- To introduce students to ideas and techniques of creative thinking and communication through different mediums.

MODULE I **30 Hrs.**

Studying various design aspects and parameters involved in designing multilevel buildings. Focusing on safety regulations and standards for medium-rise buildings. Analysis of various approaches and strategies to design problem-solving using creative thinking techniques, and theories related to human behavior.

MODULE II **70 Hrs.**

Conceptualize and develop novel solutions for the defined spaces through manual and digital approaches. Resolving the given design program by experimentation and multiple iterations leading to three-dimensional composition by understanding the layers of space-making in terms of different vertical and horizontal planes. Communicate the final outcome through high-standard graphical representations along with the Integration of services, lighting, and materials. Planning for small theme restaurants, shopping retail outlets, designer firms, etc. – individual layouts, Modular units.

MODULE III **110 Hrs.**

Communicate the final outcome through high-standard graphical representations along with the Integration of services, lighting, and materials. Interior designing for multi-functional, multi-level planning, design, and detailing of various spaces for hospitality – Resorts, Hotel rooms, Villas, Suites, Duplex Houses, Farm Houses, etc.

Max. 210 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Execute various conceptual and functional aspects of interior design to different building typologies**.**
CO2: Demonstrate the importance of various standards, safety codes, and other technical specifications
CO3: Analyse, Visualize, communicate and represent their ideas through design
CO4: Create models /3D visualizations to understand various designed interior spaces.
CO5: Resolve, anticipate, and produce design integrating physical and psychological aspects of the user

TEXT / REFERENCE BOOKS

1. Meyer B., Klanten R., Lovell S., (2007). Furnish Furniture and Interior Design for the 21st Century. Germany: Prestel Pub.
2. Bennett, W., Diamonstein, B., Diamonstein. (1982). Interior Design, the New Freedom. United States: Rizzoli.
3. Forino, I., Postiglione, G., Basso Peressut, L., Scullica, F. (2008). Places & Themes of Interiors.: Contemporary Research Worldwide. Italy: Franco AngeliEdizioni.
4. Grieco, L. (2018). The Other Office 3: Creative Workspace Design. Netherlands: Frame Publishers.
5. Zhang, C. (2018). Rethinking Workspace Design: A Workplace Design for Employees to Feel Engaged and Happy. United States: Boston Architectural College

SDEB1601	PROFESSIONAL PRACTICE	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To have a detailed understanding of the business principles, practices & procedures for Interior Designers
- To understand the roles and responsibilities of an Interior designers in professional practice as per IID code of professional conduct.

UNIT I ROLE OF INTERIOR DESIGNER IN SOCIETY 6 Hrs.

Introduction 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 get works from client: types of works, new works, partly completed works, Incomplete works by others. Various precautions to be taken before engagement, contract conditions between interior designer and client: commencement of works.

UNIT II PROFESSIONAL CONDUCT 6 Hrs

Code of professional conduct, Professional behaviour, Ethics: Scale of charges: Lump sum, cost plus percentage, type of fees, process of fees negotiations, billing methods, tax liabilities. 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.

UNIT III CHALLENGES IN PROFESSIONAL PRACTICE 6 Hrs

Interior Designer and professional relationship with stakeholders: Clients and types of clients, type of consultants in interior projects. Non-disclosure agreement (NDA), Liabilities of faulty design, professional liability insurance (PLI); Implementation of new materials & concepts in design. Professional charges as per IIID, Mode of payments, payments methods, tax liabilities. Payment to sub consultants; Handling pending payments, Negotiation mediation and arbitration.

UNIT IV PRACTICES IN INTERIOR DESIGN OFFICE 8 Hrs

Introduction to types of offices; Registration of ID office, office staff structure, hiring processes, project scheduling, delegation of works, record management, working hours, payment to employees, maintenance of accounts, PF, tax structure and benefits. Correspondence, drawings, presentations in meetings, recording minutes of meeting. Interior designer's duties: drawings and details: Interior designer's relation with stakeholders such as client, contractor, sub-contractors, consultants and authorities.

CONSTRUCTIVE ASSIGNMENTS 4 Hrs

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

Max.30 Hrs

COURSE OUTCOMES

CO1: Understand the Role of Interior Designers in society
CO2:. Analyse various Issues of professional practice
CO3: Evaluate factors influencing relationship between client and professional
CO4: Understand Interior Designer's duties
CO5: Gain knowledge of interior design practice and its types of offices.
CO6: Evaluate the importance of correspondence in design with various stakeholders.

TEXT / REFERENCE BOOKS

1. Piotrowski, C. M. (2013). Professional Practice for Interior Designers. Germany: Wiley.
2. How to Run a Successful Design Business: The New Professional Practice. (2012). United Kingdom: Ashgate Publishing Limited.
3. Ravindra, S., Krishnamurthy, K. (2014). PROFESSIONAL PRACTICE. India: PHI Learning.
4. Coleman, C. (2001). Interior Design Handbook of Professional Practice. United States: McGraw-Hill Education.
5. Shan preddy, how to run a successful design business: the new professional practice, gower publishing, ltd., 2011
6.Cindy coleman –handbook of professional practice

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks 04 x 15 = 60 Marks

SDEB1602	INTERIOR LANDSCAPE	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To understand knowledge of plant life and the science behind their life.
- To understand plants as a design element and understand its visual and physical dimensions.
- To understand the role of hardscape elements and assess their role individually.
- To understand the application of various tools in specific spatial context.

UNIT I LANDSCAPE AND BUILT ENVIRONMENT 8 Hrs

Introduction and role of landscape design in the built environment. Types of natural elements – stones, rocks, pebbles, water forms, plants and vegetation. Introduction to the study of plants in relation to landscape design and interiors. Types of indoor plants, visual characteristics: i.e., colour, texture, foliage.

UNIT II VISUAL PERCEPTION 6 Hrs

Flowers- its colours, texture and its visual perception in various indoor spaces and science of flower arrangement Indoor plants in Indian context. Plant biology, soil, moisture, light nutrient, atmospheric conditions, growing medium, pests & diseases. Botanical nomenclature, anatomy and physiology of plant growth. Market survey and costs.

UNIT III DESIGN WITH SOFT AND HARDSCAPES 8 Hrs

Design with plants – Basic principles of designs. The physical attribute of plants and relation to design. Appearance, functional and visual effects of plants in landscape design and built environment. Selection and management of plant material in relation to the built environment. Design concepts related to use of sculpture, lightings, garden furniture, architectural feature and grouping them into meaningful compositions for visual and functional efficiency.

UNIT IV LANDSCAPE DESIGN PARAMETERS 8 Hrs

Landscaping design parameters for various types of built forms- indoor and outdoor linkage to spaces. Landscaping of courtyards- residential and commercial forms. Indoor plants and their visual characteristics-Science of maintaining and growing greenery. Automatic irrigation costing and Installation of micro irrigation systems.

CONSTRUCTIVE ASSIGNMENTS

Observing and analysing the works of contemporary interior designers and landscape architects, Presentation on their interpretation of spaces, seminars and group discussions

Max. 30 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to:

CO1: Explain the basic palette of design outside the premise of the built envelope.
CO2: Familiarize with the plant life and the science behind their life.
CO3: Explain the visual and physical dimensions of plants.
CO4: Familiarize with the role of hardscape elements.
CO5: Familiarize with the application of various tools.

TEXT / REFERENCE BOOKS

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 Way finding Design: A Complete Guide to Creating Environmental Graphic Design Systems, Wiley and sons, 2007.
5. David Gibson, The Way finding 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

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks 04 x 15 = 60 Marks

SDEB1603	INTERIOR RESTORATION AND MAINTENENCE	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To understand the basic palette of design inside and outside the premise of the built envelope.
- To understand the role of maintenance and regular inspection in maintaining the interior ambience
- To understand the application of various tools in specific spatial context.

UNIT I INTRODUCTION **8 Hrs**

Renovation - Importance of renovation - Need for renovation and maintenance - Importance of Restoration - Historical heritage - Economical significance - Ergonomically Significance - Design trends. Understanding the life expectancy of different types of structures - Influence of environment elements - Effect and impact of biological agents - Chemical attack - fire attack and pollution on building interiors and components Areas of concern: walls, floor, ceiling/roof, wood work, electrical, plumbing, sanitary, furniture & furnishing.

UNIT II TOOLS AND TECHNIQUES OF MAINTENANCE **6 Hrs**

Considerations of Additions & Alterations - Evaluation and appraisal of existing conditions; Structural stability – Common building defects – causes and effects. Study of rules and regulations regarding restoration; Restitution and restoration concepts - Methods of integrating old and new interiors. Various hand and power tools required for maintenance- Grinder, Sander, and Planer. Introduction to various finishes and techniques for longevity.

UNIT III CARE AND MAINTENANCE **8 Hrs**

Maintenance of furniture, surfaces and soft furnishings, ensures longevity, maintenance of walls and ceilings, painting, repairs or alterations of plumbing, doors, window or door glass, electrical fixtures, air conditioning, water fixtures, locking devices and all other fixtures; janitorial services etc., Inspection, proper functioning, cleaning and wrap up.

UNIT IV CASE STUDY **8 Hrs**

Case study: Materials and methods for conservation and restoration work specific to interiors (various typologies).To take existing building plans - Preparing repair proposal: the blending of repair work with old work giving consideration to purpose, stability and aesthetics.

Max. 30 Hrs

COURSE OUTCOME:

On completion of this course the student will be able to:

CO1: Describe the need for maintenance for sustainability
CO2: Examine the techniques, rules and regulations regarding restoration.
CO3: Evaluate the various tools and machinery required for interior maintenance.
CO4: Distinguish between various cares techniques for furniture of various materials.
CO5: Compare the various care techniques for soft furnishings.
CO6: Prepare a repair proposal for a given interior restoration project.

TEXT / REFERENCE BOOKS

1. Basic Carpentry Illustrated. (1972). United States: Lane Books.
2. Basic Woodworking. (1986). United States: Lane.
3. Faulkner, R., Nissen, L., Faulkner, S. (1994). Inside Today's Home. United Kingdom: Harcourt Brace College Publishers.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**.

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks 04 x 15 = 60 Marks

SDEB1604	INTERIOR DESIGN MANAGEMENT	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES:

- To provide an insight into interior project management involving cost and resources.
- To learn about concepts and application of management in interior projects
- To understand the process involved in the execution of interior projects.

UNIT I INTRODUCTION **6 Hrs.**

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

UNIT II ELEMENTS OF NETWORK **8 Hrs.**

Event, activity, dummy, network rules, graphical guidelines for network, numbering of events;-defining precedence relationships among activities, estimating activities duration, estimating resource requirement for work activities; Task Assignments, Scheduling; Interior works schedule, resource schedule; men, material, equipment schedule.

UNIT III PROJECT TIME REDUCTION AND OPTIMIZATION **8 Hrs.**

Pre-tender, during tendering. Post tender planning advantages, bar chart - advantages and limitations, mile stone chart, CPM network analysis & PERT time estimates, time computation & network analysis. Critical path; Project cost, direct and Indirect project cost, S- curve, cost optimization, steps in cost-time optimization.

UNIT IV PROJECT UPDATING AND ALLOCATION **8 Hrs.**

Project tracking; Tracking of time, cost and resources. Process of updating time & resource; Resource histogram, Resource allocation, Resource smoothing and Resource levelling, Time cost trade off technique; Computer applications in project management.

CONSTRUCTIVE ASSIGNMENTS

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

Max. 30 Hrs.

COURSE OUTCOMES

On completion of this course the student will be able to:

CO1: Discuss the currently prevalent techniques in the planning, programming and management of a project
CO2: Communicate novel Ideas Briefs, Detailed Briefs and Concept Notes to general stake holders
CO3: Apply various documentation methods for the smooth organization of a project.
CO4: Identify different system changes to improve cost-effectiveness of a project
CO5: Discuss and apply usage of various project management tools

TEXT / REFERENCE BOOKS

1. KK Chitkara (1998) Construction Project Management, Planning, Scheduling and Controlling: Tata Mc Graw-Hill Publishing Company Limited. New Delhi.
2. Punmia et al., (2002). Project Planning and Control with PERT & CPM. India: Laxmi Publications Pvt Limited.
3. Wiest J., Sevy F, (1982). A Management Guide to PERT, CPM, prentice Hall of India Pub, Ltd., New Delhi
4. Burgess R.A., G.White, (1975). Building production and project Management, The construction press, London.
5. Best K., (2010). The Fundamentals of Design Management, AVA Publishing.
6. Mozota B., (2004). Design Management: Using Design to Build Brand Value and Corporate Innovation, Allworth Press.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB2605	PORTFOLIO DEVELOPEMENT	L	T	P	EL	Credits	Marks
		1	1	4	2	4	100

COURSE OBJECTIVES

- To create and impactful design portfolio & resume from scratch
- To understand various tools and techniques to portray their works efficiently
- To showcase their software and different presentation techniques and to compose their portfolio

UNIT I DOCUMENTING & COMPILATION **6 Hrs.**

Enhancing and polishing the quality of previous design work to create smooth transition from project to project | Scanning and digitizing manual work sheets and models | Initial compilation and selection of potential work | Identifying key components of each project and accentuate the strength of the project | Understanding market and employer to tailor content | Categorizing and sequencing work for smooth progression | Composing a concise write-up for design intent of every project | Representing and emphasizing skills and creative abilities.

UNIT II FIRST IMPERSSION **4 Hrs.**

Effective visual communication | Preparing a resume, cover letter / design statement | Information hierarchy and rules of resume | Grid systems for arrangement of work/information | Emphasizing important aspects of work and achievements | Expressing growth and multidimensional progression | Digital platforms to showcase portfolio & resume (Issuu, Prezi) | Analyzing existing online portfolios- Graphic Design tips

UNIT III INTRODUCTION TO INDESIGN **16 Hrs.**

Using Adobe Indesign for Portfolio Creation- Constructing the meaningful storyline of Portfolio | Maintaining clear communication throughout multiple projects & pages | Construction, Size, Orientation, Colour, Layout, Grids, Typography in Indesign | Effectively organizing graphics and visuals- including titles, styles, page composition, references and information hierarchies | Creating wireframes and mock-ups-adding images and graphics-finishing touches | Drawing legibility- working with Photoshop for image editing in conjunction with Indesign.

Introduction to Adobe InDesign | Creating and Viewing multipage Documents | Workspace and area size: Bleed and slug | Using Master Pages | Formatting Type- Character & Paragraph | Creating & Transforming Objects | Using colour & Effects | Graphics Managing & Links; Compound paths and shapes | Frame tools and guides- editing content | Using the Selection and Pen Tool to create points & paths| Styles for character, paragraph, and objects | Packaging, Exporting, Printing & Customizing.

UNIT IV UNDERSTANDING MARKET & EMPLOYER **4 Hrs.**

Self-identity & branding/promotion | Introduction to interview procedures & techniques- presenting the portfolio | Demonstration of an understanding of entire academic course and work | Telling a story about oneself and why work deserves attention | Showcasing examples of work outside of education/ training- Eg.: photography, paintings, sculptures, music, etc.

Max. 60 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Create an impactful Design Portfolio from scratch.
CO2: Practice the do's and don'ts of a good portfolio.
CO3: Employ a content-first approach to building a design portfolio.
CO4: Recognize the right software and services to build an online & printed portfolio.
CO5: Present work in a meaningful way
CO6: Maintain an easy to update template for building portfolio.

TEXT / REFERENCE BOOKS

1. Bryony Gomez-Palacio & Armin Vit (2015)- *Flaunt: Designing effective, compelling and memorable portfolios of creative work*, Underconsideration LLC

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB2606	INTERIOR DESIGN STUDIO IV	L	T	P	EL	Credits	Marks
		0	0	14	2	9	400

COURSE OBJECTIVES

- The studio aims at integrating the creative thinking process as a problem-solving technique for the Design studio.
- To enhance creative skills and lateral thinking for their multiple-space design.
- To introduce students to ideas and various principles of commercial and retail interior spaces and various materials used for the same.

MODULE I **30 Hrs.**

Summarising various safety regulations and standards for healthcare and institutional buildings. Analysis of various approaches and strategies to design problem-solving using creative thinking techniques, and theories related to human behavior.

MODULE II **90 Hrs.**

Conceptualize and integrate complex issues of the given program, the vertical and horizontal layering of functional requirements and services with a special focus on furniture layout, acoustics, lighting, and other MEP services.

Resolving the given design program by experimentation and multiple iterations leading to three-dimensional composition by understanding the layers of different vertical and horizontal planes. Communicate the final outcome through high-standard graphical representations along with the Integration of various services. Planning for small Hospital, Office Space, Shopping outlet, Planning for small office – office of architects, interior designers, lawyers, and auditors – individual layouts, Modular units. Lighting– natural & artificial light

MODULE III **120 Hrs.**

Communicate the final outcome through high-standard graphical representations along with the Integration of services, lighting, and materials. Interior designing for multi-functional, multi-level planning, design, and detailing of various workspaces on large floor plates, and interaction zones. Design of corporate Environments such as BPO, corporate office, etc.

Max. 240 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: To examine the literature, and live case studies and elaborately criticize and infer from the observations made.

CO2:. Work fluently on the selected design typology, and confer the importance of application of new materials available in the market suitable to their Building typology.

CO3: Apply the different techniques of creative thinking in design problem-solving.

CO4: Compare and contrast various spatial layouts for large-scale buildings and select suitable interior layouts for the same.

CO5: Create models /3D visualizations to understand the evolution of three-dimensional forms from two-dimensional shapes

TEXT / REFERENCE BOOKS

1. Leslie, F. (2000). Designs for 20th-century interiors. London: Harry N. Abrams.
2. Diamonstein., Bennett, W., Diamonstein, B. (1982). Interior Design, the New Freedom. United States: Rizzoli.
3. Julie K. Rayfield .The Office Interior Design Guide: An Introduction for Facility and Design Professionals (1997), Wiley Pub.
4. Visual Reference Publication, Corporate Interiors 8 INTL, Harper Design Publication
5. Pilar Chueca (2008), Office Interiors, Links International Publication
6. Mary Lou Bakker,(2016), Space Planning for Commercial Office Interiors, Fairchild Books Pub.

S102BPT	PRACTICAL TRAINING	L	T	P	EL	Credits	Marks
		0	0	0	25	8	600

COURSE OBJECTIVES

- To apply the knowledge gained in the classroom learning in the creation of real-time Interior projects and thematically understand the various stages involved in the successful execution of the project.
- To master the craft of handling scheduled interior projects and learn the office workflow structure and develop the qualities of a designer

CONTENT

Analyse and document the strength and the area of specialization while selecting an Interior/Designer office for doing an internship. Training shall be taken in the office of an Architect/Interior Designer with a minimum of five years of experience after registration, and working in the field of Design, Consultancy, and Construction. In case the student chooses to work in a firm where the principal is not an Interior Designer, he/she can be mentored by an Architect / Junior Architect / Junior Designer of the firm registered with the necessary experience. Prescribed duration of training for the student would be 100 working days. The evaluation of the performance of the students in Professional Training shall be as per the assessment procedure laid out in clause as per the regulations

COURSE OUTCOMES

On completion of the training in an interior design firm the student will be able to :

CO1: Apply and restate the importance of detailed drawings in the process of spatial design, construction and execution.
CO2:.Discuss the interrelationship between design theory, principles, and professional practice.
CO3: Interact and deal appropriately with clients, contractors, vendors, workers on site, etc.
CO4: Interpret and mitigate the challenges to be faced in professional life.
CO5: Develop leadership skills, teamwork, and coordination abilities

SDEB1801	BUSINESS MANAGEMENT & ENTREPRENEURSHIP	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To have a detailed understanding of the business principles, practices & procedures for Interior Designers.
- To enable the students to develop entrepreneurial skills.
- To analyse the environment related to small scale industry and business.
- To develop management skills for entrepreneurship development.

UNIT I BUSINESS FOUNDATION **6 Hrs**

Introduction to business and the forms of business enterprises; scope of management process; Set up of an independent design business, Hiring processes, Project Scheduling and work delegation.

UNIT II RESPONSIBILITES OF BUSINESS **6 Hrs**

Ethical and social responsibilities of and within a business, with regards to the environment, consumers, workers, investors and business approaches; Contracts and Agreements, Conflict Resolution, Arbitration.

UNIT III RUNNING A DESIGN BUSINESS **6 Hrs**

Business economics; project financing and banking system trends and guidelines within the emerging markets. Intellectual Property-Registration process of Intellectual property Rights, Design Registration, and Brand/Trademark Registration; Core marketing strategies: branding, positioning, and competitive analysis. Product or service transformation to commodity quickly as competition & duplication of successful products, analysis of competition and advertising to position and brand products and services creation of successful brands.

UNIT IV ENTREPRENEURSHIP **8 Hrs**

Meaning, need, transition to self-employment and Entrepreneurship, qualities of a good entrepreneur, problems of entrepreneurs. Economic, Legal, Socioeconomic, Psychological and Environmental factors influencing entrepreneurial development. Social Entrepreneurship, Business Entrepreneurship, Trading Entrepreneurship, Corporate Entrepreneurship, and Agricultural Entrepreneurship Timmons Model of Entrepreneurship, Investment Models, Start-up Business Models, Business Plans, Pitch presentations, Small Business models; Agencies supporting entrepreneurial Development, Institutional Finance to Entrepreneurs.

CONSTRUCTIVE ASSIGNMENTS **4 Hrs**

Demonstrate comprehensive understanding through accompanying assignments, group discussions, and site visits. 1. Visit to SIDCO, DIC and TIIC; 2. Case study of an enterprise and two entrepreneurs; 3. Preparation of a project proposal for funding.

Max.30 Hrs

COURSE OUTCOMES

CO1: Understand the foundations of a successful business practice
CO2: Correlate the theories and concepts of business management from a regional point-of-view
CO3: Understand the responsibilities of a business contract
CO4: Evaluate the potential variety of roles of a professional Interior Designer, and the range of projects they may undertake.
CO5: Examine the various entrepreneurial qualities and factors influencing development
CO6: Formulate a business plan and project proposal based on own interests and ideas

TEXT / REFERENCE BOOKS

1. Piotrowski, C. M. (2013). Professional Practice for Interior Designers. Germany: Wiley.
2. How to Run a Successful Design Business: The New Professional Practice. (2012). United Kingdom: Ashgate Publishing Limited.
3. Ravindra, S., Krishnamurthy, K. (2014). PROFESSIONAL PRACTICE. India: PHI Learning.
4. Coleman, C. (2001). Interior Design Handbook of Professional Practice. United States: McGraw-Hill Education.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

S102BPROJ	CAPSTONE PROJECT	L	T	P	EL	Credits	Marks
		0	1	25	6	14	800

COURSE OBJECTIVES

- To enable the students to develop an Interior project proposal of their choice and demonstrate their collective wisdom of Design, architecture, engineering systems, social sciences, and cultural traces.
- To resolve the Design program through creative and critical thinking abilities and skills and communicate effectively through innovative design solutions.

CONTENT

Students will be encouraged to approach the design problem (which focuses mainly on interior design and detailing) identified by him/her in a systematic way with guidance from a Supervisor on a one-to-one basis.

There shall be five continuous assessments during the semester by the review committee comprising of the internal project coordinator, internal supervisor, and External supervisor. The stages are

- Concept and internal zoning along with the case study sheets to be presented.
- Conceptual Drawings - sketches, study models, mood boards, material boards, schematic plans, sections, and construction details.
- Detailed interior plans, wall elevations, flooring, and ceiling details
- Resolving the selected design program by experimentation and multiple iterations
- Details Drawings of the final design proposal including construction details, specification of materials and service systems, and a detailed BOQ

The review marks obtained in the five assessments shall be taken into account for the internal marks. A jury consisting of internal and external examiners shall conduct the final Viva-Voce examination of the Interior Design Project in the institution at the end of the eighth semester as a University Viva Voce. The total marks scored shall be the sum of marks secured in the continuous assessments and the final university viva-voce examination.

Each student is required to submit two hard copies of the report along with a soft copy of the report and sheets. The report shall be based on the literature review, Case Study analysis, and inferences, Standards, Detailed Design program along with the concepts, design processes, and the final design.

COURSE OUTCOMES

On completion of the capstone project the student will be able to:

CO1: Prepare a detailed design brief highlighting the scope for research in different areas of interest.
CO2: Derive Design solutions through creative and analytical skills
CO3: Create a functional design by integrating knowledge of allied fields of Design and Interiors**.**
CO4: Communicate the final outcome effectively through drawings and physical/digital models
CO5: Gain the Ability to independently handle an Interior Design Project

SDEB3501	INTERIOR PHOTOGRAPHY	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To help the student understand the principles and technology of digital photography.
- To enable the student to understand the applications of interior architectural photography
- To enhance visualization skills from understanding of architectural lighting and composition.
- To gain knowledge about various post processing possibilities for digital images.

UNIT I INTRODUCTION TO PHOTOGRAPHY 8 Hrs

Introduction – Definition-Objective vs Artistic -History of Photography -Understanding the medium and its evolution -Sensors- Full frame, APS-H, APS-C -Lenses- Wide-angle, Telephoto, Prime - Perception of Human Eye- Photography Basics- Storytelling, Timing, Positioning, Abstracting, Manipulating

UNIT II UNDERSTANDING THE CAMERA 8 Hrs

DSLR Cameras- Mirror vs Mirror less - Exposure & Metering - Shutter speed, Aperture, ISO - Depth of field, Bokeh - DSLR modes- Program, Shutter Priority, Aperture Priority, Manual - Auto mode, Portrait mode, Landscape mode, Macro mode, Sport mode, Night mode - Shooting in RAW - Vibration reduction & Autofocus - Mobile photography tips and tricks.

UNIT III COMPOSITION AND LIGHTING 8 Hrs

Balance - Rule of thirds, Leading lines, Framing, Symmetry, Context, Verticals, Elevation, Emphasis, Abstraction, Humanize- Layering- Subject, Background and foreground relationships- Lighting in photography – quality and quantity; soft and hard; light direction; colour temperature, daylight vs artificial light - Lighting sources, types of lighting fixtures, types of lamps, calculating lighting levels - Flash photography, types of flashes, controlling lighting levels with flash photography

UNIT IV POST PROCESSING 4 Hrs

Adobe Lightroom & Photoshop tools and controls - Colour, Tone, Contrast and Perspective corrections - Blending multiple exposures -| Blending multiple images to form a montage | Editing RAW files and HDR

CONSTRUCTIVE ASSIGNMENTS 6 Hrs

Demonstrate comprehensive understanding through accompanying assignments, group discussions. Enhance observation and documentation skills through site visits.

Max.30 Hrs

COURSE OUTCOMES

CO1: Understand the working of mobile and DSLR camera along with its various modes.
CO2: Analyse and apply elements and principles in interior photographic work that effectively communicates ideas
CO3: Employ amateur use of most Single Lens Reflex (SLR) digital camera functions, including shooting raw.
CO4: Photograph architectural models and small products, including a studio and lighting set up.
CO5: Use High Dynamic Range, Panoramas without a wide angle lens, Control of Parallax and other manipulation techniques to create high quality images with minimal equipment.
CO6: Post-process digital images to create various outcomes.

TEXT / REFERENCE BOOKS

1. Keith Scott Kelby (2006). The Digital Photography Book, Peachpit press
2. Tom Grimme & Michelle Grimme (2003). The Basic Book of Photography, Plume
3. Eric Roth (2005). Interior Photography: Lighting and Other Professional Techniques with Style, Amphoto Books; Illustrated edition
4. Julius Shulman & Richard Neutra (2000) Photographing Architecture and Interiors, Balcony Press
5. Michael Harris (2003). Professional Interior Photography, Focal press publishers
6. Julie Adair King, (1998). Digital Photography for Dummies, COMDEX, New Delhi.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB3502	PRODUCT DESIGN	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To get an insight of various products and accessories used in Interior Spaces.
- To understand relevant products designed according to the user's needs.
- To know about the role of accessories in interiors. Integration of accessories in interior design and stylistic development.
- To learn about the practical aspects of product design processes

UNIT I INTRODUCTION TO PRODUCT DESIGN 4 Hrs

Famous successful products - Product failures - Definition & History of Product Design - The design industry and Design specializations - Invention vs Innovation - Evolution of a Product- Market pull & Technology push - Product development process- Empathise, Define, Ideate, Prototype, Test - Product Roadmap

UNIT II APPROACHES TO PRODUCT DESIGN 10 Hrs

Factors influencing Design- Function (Primary, Secondary), Performance, Fitness for Purpose, Value for money, Running costs & maintenance, Environmental concerns, Materials and manufacturing processes, Safety, Aesthetics, Planned obsolescence - Consumer Behaviour- Psychological, Social, Cultural, Personal, Economic Factors- Human Factors: Visual, Auditory, Tactual, Olfactory human mechanisms - Sensorial design and User Experience - Ergonomics- Anthropometrics, Psychology, Physiology - Product Life Cycle- Introduction, Growth, Maturity, Decline.

UNIT III MATERIALS AND PROCESSES IN PRODUCT DESIGN 4 Hrs

Study of materials and processes adopted in Product Design- Classification of Materials- 6 broad families, Metals & Non-Metals - Material selection for product design- Analysis, Synthesis, Similarity, Inspiration - Composites- Benefits and types - Innovative, Future oriented & Sustainable materials - Fabrication techniques- Additive, Subtractive, Formative Design for manufacturing & Design for assembly - 3D printing- Types, Applications, Key Points and Issues

UNIT IV RESEARCH & DEVELOPMENT IN PRODUCT DESIGN 8 Hrs

Types of product innovations- Incremental, Disruptive, Architectural, Radical - Consumer behaviour - Lifestyle influence - Consumer trends - User experience- Functional, Reliable, Usable, Convenient, Pleasurable, Meaningful - Innovative product design examples - Product design awards - Influence and types of packaging for products - Product families - Marketing Strategy, Business Analysis, Test Marketing, Commercialization- Market grouping- Geographic, Demographic, Psychographic, Behaviouristic - Marketing Tools- Product, Price, Place, Promotion - Marketing Types- Advertising, Sales promotion, PR, Sponsorship, Direct Marketing.

CONSTRUCTIVE ASSIGNMENTS 4 Hrs

Product reviews, discussions and demonstration of various usage of products. Interesting and innovative products, its application in day to day life. Simple assignments to understand the design thinking process and approaches behind each interesting products. Group discussions and critical analysis.

Max.30 Hrs

COURSE OUTCOMES

On completion of this course the student will be able to:

CO1: Discuss the role of product design and designers for our everyday environment.
CO2: Analyse the various approaches to Product and accessories design for Interior Environments.
CO3: Apply various human factors in design of products and accessories.
CO4: Develop approaches to design keeping practical aspects in mind.
CO5: Approach towards Product Design in relation with various spaces
CO6: Distinguish various design trends in the Indian and Global market.

TEXT / REFERENCE BOOKS

1. Slack L., (2008) What is Product Design? Roto Vision publishers.
2. Crochet T., Vleck D., (2008) Designer's Guide to Decorative Accessories, Prentice Hall, Ist edition.
3. Ashby M., Johnson K., (2002). Materials and Design: The Art and Science of material selection in product design, Butter Worth Heinemann, 1st edition.
4. Product Design and Development. (2003). United States: McGraw-Hill Education (India) Pvt Limited.
5. Stark J., (2011) Product Lifecycle Management: 21st Century Paradigm for Product Realisation, Springer.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB3503	TEXTILE IN INTERIORS	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES:

- ➢ To know different types of fabrics and other accessories used in the interiors
- ➢ To understand the functional and aesthetic requirements of textiles.
- ➢ To explore various application of different principles of arts in textiles
- ➢ To learn about the practical aspects of textile design and its application in interiors.

UNIT I INTRODUCTION TO FABRICS 6 Hrs

Fundamentals of textiles - Fabrics for interiors - Introduction, types of fabric and its applications. Fabric, yarn and fiber structure - Classification – natural – vegetable fibre, animal fibre , mineral fibre and manufactured fibre - Fabric structure- woven-including plain, twill, satin, Jacquard, crepe and pile weaves, warp, weft, selvedge, knitted- including single knit, double knit, tricot knit, pile knit, lace course, non-woven-including felts, webs, net and films. Identification, properties, manufacturing process and giving insight into the history.

UNIT II INTERIOR TEXTILES 10 Hrs

Interior textiles for rooms – Introduction, types, materials and its applications. Wall coverings - screens and room dividers. Windows - Types of curtain - sheer curtains, curtain drapes, reflecting textiles and blinds - Curtain construction - selection criteria relation to backgrounds in walls, floors and ceilings. Floor coverings - Rugs and carpets, types, materials, selection and care installation of floor coverings. Furniture coverings - Table textiles - Table coverings, table matts, table cloth, napkins, coasters. Upholstery - Introduction, types, materials, and different techniques. Seating - sofas, chairs, chair pads, slip covers, cushions - fills. Interior textile and accessories - Introduction, types, materials and applications in cushion, lamp shade, paintings, curios. Bedroom - Introduction, types, materials and applications in sheets, pillow cases, blankets, and mattress covers, dust ruffles. Bathroom - Shower curtains, terry towels, robes.

UNIT III APPLICATION OF ART PRINCIPLES 10 Hrs

Application of elements and principles of design across a range of textile designs in interiors – harmony, balance, proportion, rhythm, emphasis in the selection of soft furnishings, fabrics, textile arts in interiors. Use of elements of design – line, size, shape, form, color, texture and pattern in the selection of fabric for interiors. Application of related colour harmonies and contrasting color harmonies in different fabrics. Textile arts and crafts in interiors, traditional and modern materials and methods. Preparing samples on tie and dye printing, batik printing, applique, macramé and braiding - Technique and insight into history.

UNIT IV CARE AND MAINTENANCE 4 Hrs

Care and maintenance - Introduction, types of materials - stain removal of upholstery, sofas, cushions, carpets, table linen, bedroom and bathroom linen.

Max. 30 Hrs

COURSE OUTCOMES:

CO1: Compare and differentiate between different types of fibres and yarns.
CO2: Examine the process of fabric formation by weaving process.
CO3: Study the types of dyes and prints applied to decorate fabrics.
CO4: Understand the basic and special fabric finishes.
CO5: Recommend the elements and principles of design in the selection of soft furnishings.

TEXT / REFERENCE BOOKS

1. Fundamentals of Textiles and their Care- SusheelaDantyagi , Orient Longman Ltd (1980).
2. Textiles fabrics and their Selection Wingate I B, Allied publishers Ltd, Chennai.
3. The themes and Hudson manual of textile printing,Storey joyce.1992,London.
4. Introduction to home furnishings,stepat D.D 1991,the macmillan company,New York.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB3504	RESIDENTIAL INTERIORS	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES:

- To focus on functional approaches in designing various spaces in residential interiors
- To emphasize space planning and volumetric study as it relates to the anthropometrics and ergonomics in different spaces
- To explain various standards, guidelines and codes involved in design of residential interiors.

UNIT I KITCHEN **8 Hrs**

Functions performed in a kitchen, types of kitchen, principles of planning kitchen –types of layouts, ventilation, storage needs, work triangle - Planning for activities - Work heights and space dimension of different work areas and storage areas, anthropometric measurements of an individual worker and its application to kitchen layout designing – Modular kitchens -components basis of Construction involving, layouts, carcase, hardware selection, fixing details finishes and special types such as tall units, grain trolleys, and carousels fold outs etc. Principles of kitchen storage - Overhead and underneath storage areas in kitchen- Care and maintenance of storage - materials used in counters shelves – worktops, washing areas- comparative study - Green concepts in kitchens - Water supply – hot and cold, taping, water purifiers. - Electricity services – electric current, exhaust fans, electrical equipment and their locations - Waste water drainage system, waste disposal - Drainage services

UNIT II TOILET **8 Hrs**

Concepts of toilet – various layout – evolution – conventional – modern day toilet interiors – wet – dry area-anthropometry - various types of sanitary ware and their use – types of layouts –universal design – heights, storage – spatial dimensions of different work areas – Anthropometry – fixtures – types – uses – advantages and disadvantages – materials and finishes for different planes and sanitary fittings - texture and pattern, flooring, cladding and glasses in built with shower area- Water supply – hot and cold, taping, water purifiers. - Electricity services – electric current, exhaust fans, electrical equipment and their locations - Waste water drainage system, waste disposal - Various types of hardware and sanitary ware and their use in functional aspects

UNIT III LIVING ROOM & BEDROOMS **8 Hrs**

Concepts in bedroom & living room interiors – various layouts of these spaces – the use of furniture and accessories to create a certain type of ambience –materials & finishes – lighting, colour & texture.- soft furnishings – accessories – theme, unique and latest products – space saving furniture and accessories – convertible furniture – sofas – double, single seat tables – peg, nested, dining, etc. – chairs – study, dining – beds with side tables – storage etc. - natural and artificial lighting - lighting design, colour scheme – wall, floor and ceiling finishes

UNIT IV ENTRANCES & TRANSITION SPACES **6 Hrs**

Holistic concepts in residential interiors – ability to integrate various individual - spaces into one theme –entrances and foyer and its treatment – vertical movement between spaces , transition areas – accessibility, universal design- required clearances – staircases, treatments - treatment of patios, courtyards, verandas & other semi sheltered spaces – integration of built form and open spaces - Layout and Detail drawings.- related codes – organizational flow

CONSTRUCTIVE ASSIGNMENTS

Case studies of various residential spaces – preparation of layout drawings – simple sketches of layout and furniture design – scheme and concept development for different spaces

Max. 30 Hrs

COURSE OUTCOME:

On completing this course the student will be able to:

CO1: Demonstrate various planning, connectivity and demarcation of activity spaces based on standards.
CO2: Develop optimal space utilization in kitchen, bedroom, living and bathroom interiors.
CO3: Distinguish various materials and finishes used for various surfaces and their characteristics
CO4: Examine the various services utilized in kitchens, bathrooms, other spaces in the residence and their needs.
CO5: Prepare a basic layout and detailed drawings for identified spaces

TEXT / REFERENCE BOOKS

1. Alexander, N.J (1972), Designing Interior Environment, Havanouich Inc.
2. Faulkner, R., and Faulkner. S, (1987), Inside Today's Home, Rinehart publishing company, New york.
3. Riggs, R. (1992) Materials and components of Interior Design, Prentice – Hall of India Pvt Ltd., New Delhi.
4. Allen dizik (1988), A concise encyclopedia of Interior Design, 2nd edition, van nos – trend reinbold, Newyork.
5. Varghese.M.A. et al., (1994), Ergonomics in Kitchen design, Bombay.
6. Peterson M., (1998), Universal Kitchen and Bathroom Planning: Design That Adapts to People, McGraw-Hill Professional Publishing.
7. Interior Design; The New Freedom, Barbaralec Diamonstein, Rizzoli International Publications, New York, 1982.
8. Interior Colour by Design, Jonathan Poore, Rockport Publishers, 1994.
9. Worldwide Interiors – International Federation of Interior Architects & Designers, Rikuyo-Sha, Japan, 1987.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SDEB3505	WORKPLACE INTERIORS	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES:

- To learn about the importance and application of principles of design in office interiors.
- To explore various furniture and spatial layouts for different types of offices.
- To learn about the contemporary approaches to office design projects.

UNIT I INTRODUCTION **8 Hrs**

History & development: traditional to modern. Office functions: space requirements, Office features: reception, conference/meeting room, record room, workstations and equipment, pantry, lunchroom, rest rooms/toilets, ancillary spaces. Space standards and circulation patterns, office hierarchy. General office design.

UNIT II SPACE PLANNING & ERGONOMICS **8 Hrs**

Space planning for office interiors – cabinets, conference rooms open office systems. Comfort and Ergonomics in Office furniture: work tops, storage, chairs, equipment, workstations or system furniture. Space management and flexibility in design; Modular furniture design for offices spaces; Adjustable desks and storage, Mobile and Resilient chairs, Portable chairs, Movable Tables, Lounge seating, Internal and external signage.

UNIT III LIGHTING AND COLOUR **6 Hrs**

Importance of lighting and colour; Daylight and its factors, Artificial Light sources, Types – based on material, reflection, uses. Specific factors in lighting – measurement of lighting, location and direction, size and shape and colour; Visual acuity and colour vision, Lighting levels, contrast and glare; Psychological aspects of colour and lighting in the workplace.

UNIT IV ENVIRONMENT AND BIOPHILIA **8 Hrs**

Meaning, concept and impact of Biophilia on human health: need, importance and benefits. Green interiors, Health friendly materials, Occupational hazards in work environment, Visual stress, Postural Stress, Environmental conditions and factors for Indoor Environmental quality in the workplace**.**

CONSTRUCTIVE ASSIGNMENTS

Case studies of different office interiors – literature and live study and documentation of co working spaces and furniture layouts - preparation of layout drawings – simple sketches of layout and furniture design – scheme and concept development for different spaces

Max. 30 Hrs

COURSE OUTCOME:

On completing this course the student will be able to:

CO1: Interrelate the various functions in an office and their spatial requirements
CO2: Relate significance of anthropometry and ergonomics to workplace designing
CO3: Discuss the various possibilities with flexible / modular furniture in offices.
CO4: Compare the importance of natural and artificial light, their application and perception in design of office spaces.
CO5: Recognize the psychological impacts of colour and material on work behaviours.

TEXT / REFERENCE BOOKS

1. DechiaraJ.,Panero J., Zelnik M., (2011). “Time Saver Standards for Interior design and Space Planning”, McGraw Hill, London.
2. Bakker, M. L. (2016). Space Planning for Commercial Office Interiors. United Kingdom: Bloomsbury Academic.
3. McKeown &Twiss, (2001), ‘Workplace Ergonomics: A Practical Guide’, IOSH services.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks:	08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks:	04 x 15 = 60 Marks

SDEB3601	SET DESIGN	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES:

- To understand diverse concepts, philosophies and set designs of known art directors, movie reviews case studies of different film cities in different contexts.
- To introduce the fundamentals of art direction, design and creation of sets.
- To identify and explore various process involved in creating interesting design concepts

UNIT I HISTORY AND ELEMENTS OF A SET **8 Hrs**

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; Elements of Image Making - stage craft, Accessories, Props, Design of Space - elements of Form, Colour, Light, Sound, Time, Graphic, Location, themes and materials, graphics design, reuse and set design.

UNIT II THEORY OF ART DIRECTION **6 Hrs**

Drawing and Design, Theory for Art Direction, Relations between Scene vs Characters, Scene vs Painting, Scene vs Script, Scene vs Drama, translation from 2D to 3D.

UNIT III PROCESS OF DESIGNING AND CREATING A SET/STAGE **10 Hrs**

Analyse scripts to determine theme, concept, mood, location, style, period, special needs, Character, setting of the drama/movie, initial sketches of the design, materials and construction of the set and execution. Introduction to the basic concepts, through theory and practice, of scene design in theatre, film, and other fine arts and entertainment media. 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, colour, and architectural analysis.

UNIT IV CASE STUDIES **6 Hrs**

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

CONSTRUCTIVE ASSIGNMENTS

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

Max. 30 Hrs

COURSE OUTCOMES:

CO1: Distinguish between various design and production methods of performance media.
CO2: Understand the elements and principles, spaces and props used in image making.
CO3: Analyse scripts for proper scenery.
CO4: Conceptualize designs that will translate into actual sets, and develop visual thinking within the creative process.
CO5: Utilize colour, materials and spatial compositions to determine a concept or style.

TEXT / REFERENCE BOOKS

1. Neumann D. (1997). Film Architecture: Set Designs from Metropolis to Blade Runner, Prestel.
2. Fear B. (2000). Architecture + Film II, Architectural Design, Wiley Academy,
3. Lamster M. (2013), Architecture and Film, Princeton Architectural Press.
4. Nystorm H. (1979). Creativity and Innovation, John Wiley & Sons

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks:	08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks:	04 x 15 = 60 Marks

SDEB3602	FURNITURE AND INTERIORS	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES:

- To discuss and facilitate the students to study about various anthropometric aspects, human factors & other design criteria involved in the design of furniture.
- To introduce and expose students to various materials & technology involved in the making of furniture.
- To focus on the craft of the Furniture -Maker, utilizing state of-the-industry procedures and equipment.
- To emphasis on different materials characteristics and its application as different products

UNIT I EVOLUTION OF FURNITURES **8 Hrs**

Elements of style and determinants of furniture designs during Egyptian, Greek, Roman, Romanesque, Gothic, Renaissance, Industrial Revolution – furniture styles including oriental style – Chinese and Japanese – Indian furniture - Rajasthani, Saharanpur, Dravidian style, Jain style, Buddhist style- Islamic style, Indo-Saracenic style- English furniture from 16th to 18th century. Tudor, Stuart, Jacobean, Restoration period, Queen Ann period, Gregorian period, Chippendale, Sheraton - Contributions in the beginning of the 20th century by the pioneer architects in furniture design – Bauhaus, De Stijl, Charles, Ray Eames & other modern furniture designs.

UNIT II COMPONENTS TYPES OF FURNITURES **8 Hrs**

Anthropometry and different concepts and criteria involved in the design of various furniture – bedroom furniture – cot, bedside lockers – wardrobes – cupboards – shelves – bunk beds – study tables etc. – kitchen –dining areas – display furniture – sofa etc - Types of furniture – Built in furniture – Movable furniture – Systems furniture – Specially Designed furniture – Readymade furniture – Storage Systems - Functional analysis of Storage systems - Deriving types of Cabinets needed for interior spaces - Kitchen cabinets, Wardrobes closets, Book cases, Show cases display systems - Modular, Knockdown & Economy Furniture. Traffic pattern and furniture layout for residence, commercial and office areas - Furniture for the physically challenged

UNIT III DESIGN PRINCIPLES AND DETAILING **8 Hrs**

Exploration of the Idea of Furniture - Design approaches in furniture design. - Form – Colour – Symbols - Materials & finishes – Wood, Glass, Metal, Plastics and Upholstery – include various finishes - An Introduction of Various Manufacturing Processes - Injection Moulding - Investment casting - Sheet metal work, Die casting, Blow- moulding, Vacuum – Forming - Different types of seating with a focus on the following: - Functionality. - Aesthetic. - Style. - Human factors and ergonomics. - The cost of the designed furniture piece - Fabrication Techniques involved - Multiple Utility Oriented Approaches to Furniture Design.

UNIT IV FURNITURE FOR VARIOUS SPACES **6 Hrs**

Residential Furniture – Seating, Sleeping, Storage & Children's furniture - Commercial furniture – Showcases, Counters, Display units, Restaurant - furniture, bar furniture - Office furniture – Adjustable desks & storage, Mobile & Resilient chairs, - Portable chairs, Movable Tables, Lounge seating - Layout and Detail drawings.

CONSTRUCTIVE ASSIGNMENTS

Case studies of various furniture designs – preparation of layout drawings – simple sketches of layout and furniture design – scheme and concept development for different spaces

Max. 30 Hrs

COURSE OUTCOME:

On completing this course the student will be able to:

CO1: Distinguish between different styles of furniture their period and evolution
CO2: Demonstrate on different types of furniture for various spaces based on standards.
CO3: Criticize on distinct design principles involved in design and detailing of furniture for diverse spaces and functions
CO4: Examine the various materials, finishes and techniques used for manufacture of furniture.
CO5: Prepare a basic drawings for identified simple furniture with material specification

TEXT / REFERENCE BOOKS

1. Leslie Martin; MACMILLAN- Architectural Graphics
2. Jolhe D A , Tata McGraw Hill , New Delhi -Engineering Graphics
3. Francis D.K. Ching, John Wiley & Sons, New York -Interior Design
4. Joseph Aronson , Crwon Publishers, New York- The Encyclopedia of Furniture
5. Sherril Whiton, Prentice Hall; Interior Design & Decoration
6. Francis D. K. Ching , VNR, 1975,- Building Construction Illustrated Reference Books:
7. Powell, Dick; Design Rendering Techniques: A Guide to Drawing and Presenting Design Ideas, Publisher: North Light Books, 1996
8. W.B.Mckay –Building construction Vol1 –Longmans, UK 1981
9. W.B.Mckay –Building construction Vol 3 –Longmans, UK 198

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks : 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks 04 x 15 = 60 Marks

SDEB3603	CODES, STANDARDS AND GUIDELINES	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To expose the students to the various problems and issues encountered in the practice of interior design
- To introduce the practice of Interior design as a profession and to teach them the methods of legal redressal.
- To develop understanding of the duties and liabilities of an Interior designer
- To explain the importance of bye-laws that relate to the building and the environment in the Indian context.

UNIT I ELECTRICAL AND FIRE SAFETY CODES **8 Hrs.**

Fire – combustibility – NBC – fire resistant rating of materials – fire fighting requirements – wet riser, dry riser, fire zones, fire escape stair case, fire alarms, smoke detectors and fire lifts - Typical electrical layout for a building – location requirement for switch rooms and distribution panels – codes for fan points, power points and light points – PVC-sheathed wiring system – protective earthing – earth electrode.

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UNIT II CODES FOR LIGHTING AND VENTILATION **8 Hrs.**

Measurement of illumination and luminous intensity – day light factor – sky luminance – ERC, IRC – light output ratio - recommended illumination levels for various spaces such as library, class room, garment factory, etc. Energy conservation in lighting - Ventilation rates – air changes per hour – relative humidity – cross ventilation, stack effect, recommended ventilation rates for kitchen, toilet, etc.

UNIT III CODES FOR ENERGY CONSERVATION **6 Hrs.**

Rating systems - national and international "building codes" - Energy Conservation Building Code (ECBC) and the National Building Code - Indian Green Building Council (IGBC) - In India, TERI has developed its independent rating system called the Green Rating for Integrated Habitat Assessment (GRIHA) rating system. GRIHA is now endorsed by the Ministry of New and Renewable Energy, Government of India

UNIT IV BARRIER FREE ENVIRONMENT CODES **8 Hrs.**

Requirement of toilets, corridors, etc. for handicapped persons – wheel chair - clearances – ramps for handicapped, etc. according to ISO 9001 Standards – Furniture codes as BIFMA , FIRA, etc..

CONSTRUCTIVE ASSIGNMENTS

Preparation of different layouts for small interior spaces implementing the guidelines and codes

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Discuss in detail about the codes adopted for electrical and fire safety in a building
CO2: Explain and apply the guidelines for lighting and ventilation design for an individual building
CO3: Demonstrate different energy conserving principles and codes adopted for the same.
CO4: Illustrate the principles adopted to design barrier free interiors
CO5: Discuss various codes, standards and guidelines followed and adopted for designing spaces and interiors

REFERENCES

1. National Building code of India 2005 – Bureau of Indian Standards
1. V.K.Jain – Fire Safety in Buildings, New age International (Pvt Ltd) publishers, Chennai, 2007.
2. IS 9668 : 1990 – Fire fighting code of practice - Bureau of Indian Standards.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks : 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks 04 x 15 = 60 Marks

SDEB3604	RESIDENTIAL INTERIOR AND STYLING	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To get an insight into various finishes and accessories used in residential interiors
- To understand relevant properties of materials and products suggested and designed based on user's needs.
- To know about the role of lighting, storage units, organizers and accessories in residential interiors.

UNIT I INTRODUCTION **8 Hrs.**

Introduction – types of interiors residential – Concepts, themes, ambiance, and aesthetics in designing residential interiors – available furnishings and accessories for various spaces in residential interiors - Accessories styles – elements and accessories of various design movements - Modern, contemporary, minimalist, electric, vibrant, mid modern century, traditional, transitional, rustic, coastal, Tuscan, classical, oriental - various factors, codes and constraints influencing the design of residential interiors - materials used in designing residential interior spaces - Application of codes, accessibility guidelines, and policies and procedures.

UNIT II ROLE AND SIGNIFICANCE OF ACCESSORIES **8 Hrs.**

Different types of accessories -trends in residential interiors – accessories for various spaces and functions - functional accessories – decorative accessories- decorative items – formal space and informal space in a residence - accessories as style, focal point, space enhancers, foreground background- colour palette – texture - personal expression - etc. – finishing touch – reflection of style and philosophy – layering of furnishings and accessories – accent furnishings -

UNIT III ACCESSORIES **8 Hrs.**

Decorative accessories and its types – role of accessories and its importance – movable and immovable decorations and furnishings – shape size of the space and selection of accessories based on the size of the room – traditional accessories – modern accessories – layers of decorations and supporting accessories – wall stickers, sculptures – photo frames, paintings – clocks, pictures – lights – plants – fire places – bookshelves – mirrors art works- antique collections etc.

UNIT IV FURNISHINGS **6 Hrs.**

Spaces in a residence – living room, lounge, reception, drawing room, kitchen, bedrooms, study rooms, transition spaces, staircase etc., characteristic and properties of various furnishings – quality, cost – furnishings as in linen, fittings, curtains, rugs, placemats, cushion covers, table covers, color scheme – carpets for residences – care and maintenance – textures, finishes

CONSTRUCTIVE ASSIGNMENTS

Showroom visit and study, Case Study – Different Retail and commercial outlets for accessories, documentation and report preparation, Specification study

Max. 30 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Discuss in detail about various concepts theme, ambience of residential interiors.
CO2: Differentiate significant role of accessories in relevance to various spaces and its functions
CO3: Demonstrate furnishings, finishes and accessories with technical specification and application
CO4: Identify the properties, pros and cons of accessories, finishing materials and understand their contextual application
CO5: Discuss and interpret the knowledge gained on styling and finishes

REFERENCES

1. Shah, M G & others, Building Drawing : An Integrated approach to build Environment, 5TH edition,
2. Tata McGrow Hill Publications Company Ltd, New Delhi, 2012
3. 2 Kilmer, Working Drawings & Details for Interiors, John Wiley & Sons., 2009
4. Ahmed A. Kasu, Interior Design

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks 04 x 15 = 60 Marks

SDEB3605	RETAIL INTERIORS	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To get an insight into various materials and accessories used in commercial and retail Interior Spaces.
- To understand relevant materials and products designed according to the user's needs.
- To know about the role of lighting, display units, and accessories in commercial interiors.
- To learn about the application aspects of commercial space design processes.

UNIT I INTRODUCTION **6 Hrs.**

Introduction - Commercial interior space design- Retail Interiors - types of commercial interior spaces – factors influencing designing of commercial interior spaces – materials used in designing commercial interior spaces - Application of codes, accessibility guidelines, and policies and procedures. Concepts, themes, ambiance, and aesthetics in designing commercial and retail interiors.

UNIT II TYPES AND TRENDS IN COMMERCIAL INTERIORS **8 Hrs.**

Study of user types - user behaviour - concepts relevant to commercial interiors - Functional aspects related to circulation and integration of different spaces - New trends in commercial Architecture - design in a commercial building. Basic concepts of Commercial buildings – hospitals – warehouses – shopping centres -. Departmental stores - Shopping complexes – retail stores – its characteristic features - requirements

UNIT III COMMERCIAL ART **6 Hrs.**

Concept of commercial art – Meaning and Definition, Development of commercial art – the role of art in interiors – applied art in interiors - Art in Commercial space– Restaurants and Hotels. Public utility services – airports, Educational Intuitions, Hospitals, Shopping complexes, Exhibitions, Schools, Malls, Universities, and Trade Fairs.

UNIT IV COMMERCIAL DISPLAYS **10 Hrs.**

Commercial display and Techniques – Interior Display – types of display – different arrangements – various layouts for display - principles, and factors influencing display- types and merchandise display - types of lighting arrangements for various display types – display in retail – Retail store design - Window display – meaning and concept, Basic principles and techniques, types of window display, window arrangement.

CONSTRUCTIVE ASSIGNMENTS

User Analysis – Specific Examples, Material sample – Site visit and study, Case Study – Different Retail and commercial outlets, Different Brands – Display Units – Specification study

Max. 30 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Explain about different types and characteristic features commercial and retail interiors

CO2: Identify and demonstrate about user psychology related to different commercial spaces.

CO3: Demonstrate different forms of applied arts in commercial interiors and retail outlets

CO4: Critically demonstrate the significance and different types of lighting in commercial display and its interiors

CO5: Criticize, visualize and appraise various types and materials involved in designing commercial spaces and retail outlets

TEXT / REFERENCE BOOKS

1. Binggeli, C., Ching, F. D. K. (2012). Interior Design Illustrated. United Kingdom: Wiley.
2. The Handbook of Interior Design. (2015). United Kingdom: Wiley.
3. Linton, H. (2003). Color in Architecture: Design Methods for Buildings, Interiors, and Urban Spaces. United Kingdom: McGraw-Hill.
4. Poore, J., Ragan, S. L. (1994). Interior Color by Design: A Design Tool for Architects, Interior Designers, and Homeowners. Hong Kong: Rockport Publishers.
5. Whiton, S. (2013). Elements Of Interior Design And Decoration. United Kingdom: Read Books Limited.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks 08 x 05 = 40 Marks

PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks 04 x 15 = 60 Marks

SDEB3801	INTERACTION DESIGN	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES:

- To discuss the importance of aesthetics and its relationship with human centric design.
- To explain and facilitate the students about visual information and its impact in design
- To help students understand the way of aesthetic stimulated the design.

UNIT I USER STUDIES **8 Hrs**

Gathering user data through contextual inquiry techniques - Interpreting interviews within groups, creating work models (flow, sequence, culture, physical, artefact etc.) - Consolidating data across users - Building affinity diagrams - Using data in the design process - Comparison of contextual interview to other techniques such as survey research, focus groups, Rapid Assessment Procedure, task analysis - Focus will be on studying problems faced by users from rural areas, users with special needs, literacy issues etc.

UNIT II INTERACTION DESIGN **8 Hrs**

Design methodology for complex products, services and events: Design of integrated systems, products for future use, products to be used in groups, devices used in public places, design of multi-modal interfaces, expressive interfaces, products that enrich user experience - inter-disciplinary approach drawing upon product design, visual communication, information architecture, cognitive psychology and computer science - working collaboratively in groups to solve design problems.

UNIT III HUMAN FACTORS **8 Hrs**

Introduction to Human Factors - Role of psychology, physiology in interaction design - Human factors in work station and work environment design - Cognitive psychology of design - Sensation and perception - Human information processing and execution - Elements of learning, - Learning theories of Behaviourism, Cognitivism and Constructivism - Piaget‟s Development theory

UNIT IV INTERACTION AND INSTRUCTIONAL DESIGN **6 Hrs**

History of technology development, influences on society and design-Information and communication technology, past, present and future-Influences from other media- New trends in interaction design-Interaction design in the context of India - Design for future needs Instructional design development process - Computers as teaching and learning tools - Case studies in e-learning

CONSTRUCTIVE ASSIGNMENTS

Case studies of various furniture designs – preparation of layout drawings – simple sketches of layout and furniture design – scheme and concept development for different spaces

Max. 30 Hrs

COURSE OUTCOME:

On completing this course the student will be able to:

CO1: Develop an understanding to increase awareness of the need of user studies and its impact in design development
CO2: Distinguish the significance of design methodology in developing design solutions
CO3: Develop skills to understand the various human factors involved in interaction design
CO4: Develop techniques to obtain basic knowledge in the application of different teaching and learning tools
CO5: Illustrate the ability of design idea and explain the breadth and scope of interaction design

TEXT / REFERENCE BOOKS

1. B. Shneiderman, *Designining the User Interface: Strategies for Effective Human-Computer Interaction,* (3rd Ed.), Addison Wesley, 2000.
2. Preece, Rogers and Sharp, *Interaction Design: Beyond Human –Computer Interaction,* John Wiley and Sons, Delhi, 2003.
3. A. Dix, J. Finlay, G.D Abowd and R. Beale, *Human Computer Interaction (3rd Ed.)*, Pearson Education Ltd., 2004.
4. W.O. Galitz, *The Essential Guide to User Interface Design of Interaction Design,* John Wiley and Sons, 2002.
5. Ratner, Julie, ed. Human factors and web development. CRC Press, 2002.
6. Sanders, M.S; McCormick, Ernest J; Human factors in engineering and design, McGraw Hill (1993)
7. Zunse, Leonard; Visual perception of form; Academic Press (1990)
8. Forman, George E.; The Child‟s Construction of Knowledge: Piaget for Teaching Children; National Association for the Education of You (1983) Syllabus - Second Semester 15
9. Furth, Hans G.; Wachs, Harry; Thinking Goes to School: Piaget‟s Theory in Practice; Oxford University Press (1982)
10. Gagne, Robert M.; Wager, Walter W.; Golas, Katharine; Keller, John M.; Principles of Instructional Design; Wadsworth Publishing; 5th Edition (2004)

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks 04 x 15 = 60 Marks

SDEB3802	DIGITAL TECHNOLOGIES IN INTERIOR DESIGN	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES:

- To design, prepare and fabricate various elements using necessary process and tools
- To understand new and futuristic technologies relevant to the interior design field and process
- To develop skills for fabrication-oriented design with respect to advanced computational methods

UNIT I DIGITAL FABRICATION **8 Hrs**

Introduction to digital fabrication- Shift from traditional craftsmanship to digital fabrication - Challenges and opportunities in digital fabrication - Various computers controlled manufacturing processes -Prototyping and integrating technology in the design process- Subtractive, Additive & Formative Fabrication Processes - Technology across 3 scales: object, enclosure, architecture.

UNIT II COMPUTATIONAL DESIGN **8 Hrs**

Computer aided design (CAD) vs Computational design- Application of computational strategies in interior design - Computational processes at the conceptual level- Digital development of innovative and complex geometries - Visual Programming and Generative design - Introduction to Rhino & Grasshopper.

UNIT III TRENDING TECHNOLOGIES **8 Hrs**

Integrating new technologies - LiDAR for documentation and representation - AR- Augmented Reality & VR- Virtual Reality- Uses in planning, prototyping, and presentation/visualization stages History, Process, Advantages and Challenges and Examples in Interior Design - Software and Hardware required - Uses of multiple technologies in conjunction- Future possibilities

UNIT IV FUTURE TECHNOLOGIES **6 Hrs**

AI- Artificial Intelligence in the ID process - Machine/Deep learning in data analysis and development of iterations- examples Havenly, Houzz, Planner 5D, Leaperr, Mid journey.

Max. 30 Hrs

COURSE OUTCOME:

CO1: Possess the skills and techniques for editing and fabrication through digital medium.
CO2: Visualize complicated forms with computational strategies
CO3: Demonstrate effective communication of drawings through software techniques
CO4: Integrate design process through various digital medium and communicate ideas 3 dimensionally
CO5: Apply the knowledge of digital technologies and various processing tools for development of projects

REFERENCES

1. David Bachman, Grasshopper: Visual Scripting for Rhinoceros, 25 May 2017
2. Jake Knapp, John Zeratsky, Braden Kowitz ,How to Solve Big Problems and Test New Ideas in Just Five Days,2016
3. Tobias Hollerer and Dieter Schmalstieg, Pearson Augmented Reality Principles And Practice
4. Chetankumar G Shetty, Augmented Reality - Theory, Design and Development

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks : 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks 04 x 15 = 60 Marks

SDEB3803	INTERIOR STYLING AND FINISHES	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To explore different materials used for styling the designed interiors and furniture
- To understand and appreciate the works of earlier and contemporary designers.
- To generate distinct ideas and perceptions which enriches new thoughts about usage of available materials to create and innovate interesting accessories and finishes.

UNIT I INTERIOR STYLING EVOLUTION **6 Hrs.**

Interior Styling and Architecture through the timeline - Neolithic, Mesopotamian, Ancient Egyptian, Ancient Greek, Roman, Byzantine Moorish, Gothic, Renaissance, Baroque, Rococo, Industrial Revolution, Neoclassical Styles (Georgian), Victorian, Edwardian, Arts and Crafts, Art Nouveau, Modernism, Art Deco, De Stijl Movement, Bauhaus or International Style, Postmodernism, Minimalism, Contemporary – focusing on evolution from animal skin, spiritual murals, sculptures, painted urns, tapestries etc.

UNIT II STYLING IN INDIAN INTERIORS **6 Hrs.**

Indian Interior Design Influence of Religious Beliefs Characteristics, Decoration & Ornamentation - colours – textures – soft and hard furnishings – small accessories in different regions – cultural and religious significance – local crafts and its application in interiors – vases – pottery – embroidery – dye – art of molding – hand woven fabrics – patterns and motifs – paislays – mandalas – birds - flowers etc. – paintings – statues - Wall paintings / hangingsetc.

UNIT III FURNISHING MATERIALS – I **8 Hrs.**

Furnishings - Wall - Wall paper, wall panelling, wall cladding, wall mural. Floor - flooring with special finishes - Flooring: Different types of carpets , Rugs, Druggets - Woollen Carpet : (a) Hand Made Carpets (b) Hand tufted carpets (c) Machine made carpet (i) Cutpile (ii) Uncutpile Quality of raw wool, quality of other raw materials used; Impact of colours; Technical specification : Knots/Tuffs per Sqr. cm. pile height, Ply of yarn, count of yarn, weight, fastness, flame resistance tests, resilience tests and acoustic quality, trade names, ISI and wool mark. Sizes and mode of measurements - Installation: wall to wall carpets on floor fixing, carpets on wall ceiling for acoustics; joining, edge binding and fringing of carpets. Fitting and accessories; Types of underlay; How to remove a fitted wall to wall carpet; How to re-lay wall to wall carpet - Care & Maintenance:

UNIT IV FURNISHING MATERIALS - II **10 Hrs.**

Ceiling - Ceiling coverings - fabric. Upholstery - Introduction, types, materials, and different techniques - Curtain Materials (Draperies) - Cotton curtains; Silk curtains; Cotton silk mixed; Synthetic fiber curtain; Woollen curtains; Synthetic and wool blended curtains; Flame resistant property. Wrap and weft texture, dyes blends, weight, cost, care of the above - Types of curtains like plain, french pleated, etc. - Lining materials, Blackout curtains and Blinds - Fittings used - Curtain rods, rings, railing, hooks, sliding, stage curtains - Venetian blinds (Horizontal and vertical), Roller blinds and space curtains - Upholstery Covering Material (Tapestries & Other Items) 1. Introduction to various kinds of tapestries and their basic distinguishing qualities - Cotton - Silk - Synthetic - woollen - Rexene - Leather - Blended To study their properties, design, dye, texture, size, weight, stitching and care - Cushioning materials: Springs; Jute, cotton, foams, rubber - Miscellaneous Items: cane, jute, leather straps, slip covers, fasteners, etc - Other Furnishings: - Bed cover, cushion covers - their designs, stitching, (handloom, mill made, tufted candlewick, khadi and other types - both woven and printed). - Table liner bath mats, toilet sets, etc.- Seating - sofas, chairs, chair pads, cushions - fills, Bed room and Bath room linen. - Artefacts, antique products, - Curtains, blinds & awnings, any other products which enhance an interior space – care and maintenance

CONSTRUCTIVE ASSIGNMENTS

Documentation and review of various accessories in different regions - Case study presentation of various furnishing materials in the past and present – presentation of designs systems and elements, of materials learnt for various structural systems and their properties. **Max. 30 Hrs.**

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Discuss in detail about the timeline and evolution of various styles in interior furnishing and finishes
CO2: Differentiate various beliefs and concepts behind accessories and their significance in interior spaces.
CO3: Demonstrate furnishings, finishes and accessories with technical specification and application
CO4: Identify the properties, pros and cons of accessories, finishing materials and understand their contextual application
CO5: Discuss and interpret the knowledge gained on styling and finishes of the past and prevailing current trend in interiors.

REFERENCES

5. Shah, M G & others, Building Drawing : An Integrated approach to build Environment, 5TH edition,
6. Tata Mc Grow Hill Publications Company Ltd, New Delhi, 2012
7. 2 Kilmer, Working Drawings & Details for Interiors, John Wiley & Sons. 2009.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks 04 x 15 = 60 Marks

SDEB3804	BUILDING AUTOMATION AND OFFICE INTERIORS	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES:

- To enable the students to discuss about various controls and monitoring systems in large public buildings
- To introduce different components of BMS and application of the same in office buildings
- To evaluate the functional efficiency of building under BMS

UNIT I INTRODUCTION **8 Hrs**

Introduction to concepts and application of Building Management System (BMS), Introduction to IBMS and its applications with examples in architecture, Automation system – areas of application-requirements and design considerations. Issues and challenges faced in automated buildings- advantages and disadvantages on functional efficiency. Building automation systems & controls - Philosophy, system configuration, system modules, distributed systems, communication protocol and on-line measurements

UNIT II BUILDING MANAGEMENT SYSTEMS **8 Hrs**

Fire protection, security and energy management. Control objectives. Sensors, controllers and actuators. Control system schematics system design. Microprocessor based controllers & digital controls. Examples of sub-systems such as: Digital Addressable Lighting Interface (DALI). Communication and security systems: Voice communication systems, local area network, wireless LAN, Digital TV, CCTV, digital CCTV, teleconferencing, cellular phone system, and CABD. SMATV. Data networking. Short- and long-haul networks. Wideband network. Office automations. Public address/sound reinforcement systems. Digital public address system. Modern security systems. Integrating the technologies and systems: The impact of information technology on buildings and people.

UNIT III AUTOMATION AND MANAGEMENT SYSTEM **6 Hrs**

Concept and application of Automation and Management System; Design issues related to building automation and its effect on functional efficiency; Components of building automation system; HVAC, electrical, lighting, security, fire-fighting, communication etc.; Integrated approach in design, maintenance and management system; Current trend and innovation in building automation systems; Impact of Information Technology; Concept of artificial intelligence; Knowledge base and decision support systems and building automation and management system; Application of expert system in building automation; Stages in development of expert system, expert system application in architecture; Computerizing building management information.

UNIT IV INTELLIGENT BUILDINGS **8 Hrs**

Building characteristics: Features and benefits of intelligent buildings. The anatomy of intelligent buildings. Environmental aspect. The marketplace and other driving forces behind the emergence of intelligent buildings - Modern intelligent vertical transportation systems: Sky lobby, double-deck lifts, twin lifts, advanced call registration systems, large scale monitoring systems, applications of artificial intelligence in supervisory control, energy saving measures related to lift systems/escalator systems, other modern vertical transportation systems, such as: gondola systems, materials handling systems, etc. Interaction and integration between building structure, systems, services, management, control and information technology. Application & design software packages.

CONSTRUCTIVE ASSIGNMENTS

Case study: International Financial Centre II, International Commerce Centre, Central Plaza and similar buildings

Max. 30 Hrs

COURSE OUTCOME:

On completing this course the student will be able to:

CO1: Distinguish between different styles of furniture their period and evolution
CO2: Develop own Bluetooth operated home automation system
CO3: Compare different control devices, electrical loads and its application
CO4: Examine various techniques in developing and installing detectors and alarm systems
CO5: Prepare a basic layout for a project based on automated systems.

TEXT / REFERENCE BOOKS

1. Clements-Croome, Derek, Intelligent Buildings: An introduction, Routledge, 2014
2. Shengwei Wang, Intelligent Buildings and Building Automation, Spon Press, 2010
3. Jim Sinopoli, Smart Building Systems for Architectures, Owners and Builders, Elsevier, 2010
4. Manolescue, Integrating Security into Intelligent Buildings, Cheltenharn, 2003
5. Rules of Automatic Sprinkler Installation – 2nd Edition – Published by Tariff Advisory Committee.
6. Fire Suppression Detection System – Author: John L. Bryan
7. Design and Application of Security / Fire Alarm system – Author: John E. Traister.
8. Bryan, J. L. (1976). Automatic sprinkler & standpipe systems (Vol. 1). National Fire Protection Association (NFPA)

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks 04 x 15 = 60 Marks

SDEB3805	SMART HOME	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES:

- To enable the students to discuss about various controls or monitoring signals from different appliances, or basic services.
- To learn about energy efficiency and different networking and fire alarm systems
- To introduce and expose students to various automation systems and its application in domestic buildings.

UNIT I FUNDAMENTALS OF BMS **8 Hrs**

Home automation – Introduction, definitions, objectives, scope, concept of green & smart design, energy management systems, MEP design fundamentals, advantages and disadvantages - Automation in Interiors – introduction, definitions advantages and disadvantages. Sensors –classification – based on types and requirement, design consideration, advantages, and disadvantages - Introduction to CCTV Systems, Types of CCTV Systems, Camera Selection and Design Concepts, Camera Types, Camera Specifications & Features. Introduction to Digital Video Recorder, Setting a DVR, DVR Structure and Sections, Classification of DVR, Special DVRs, Networking.

UNIT II SAFETY AND SECURITY SYSTEMS **8 Hrs**

Intrusion Detection & Alarm System - Smart homes – introduction, definition, terminologies, elements of smart homes advantages and disadvantages. Smart appliances – introduction, advantages and disadvantages - Smart kitchens – introduction, definition, advantages and disadvantages - Smart gadgets – Bluetooth operated appliances, Alexa or Google voice controls, sensor based plumbing fixtures - Sensor based Lighting systems – introduction, types, controls, advantages, disadvantages. Energy efficient lighting system – introduction, types of sensors, advantages and disadvantages

UNIT III NETWORKING **6 Hrs**

Smart Communication – Introduction, definitions, importance of smart communication, types, and properties. Wireless communication systems – uses in homes, types, advantages, and disadvantages. - Introduction to concept of Cloud Services - LAN, WAN, implementing of networks, Introduction to Cloud services - sharing of files, printing and scanning, network protocols-TCP/IP, Ethernet, Modbus

UNIT IV ALARM SYSTEMS **8 Hrs**

Introduction To Fire Alarm System, Need For Fire Alarm System, Types Of Fire Detectors Types Of Fire Panels, Conventional And Addressable System, Input-Output Modules, Indicators & Annunciators Fire Cables And Classes Of Wiring, Fire Alarm Wiring And Configuration, Conventional Addressable Fire Panel Interfacing With access control System, Sensors-heat, smoke, pir, conventional fire alarm panels, addressable fire alarm panels, cabling, safety standards, alarms, pa systems, recorders

CONSTRUCTIVE ASSIGNMENTS

Case studies of various furniture designs – preparation of layout drawings – simple sketches of layout and furniture design – scheme and concept development for different spaces

Max. 30 Hrs

COURSE OUTCOME:

On completing this course the student will be able to:

CO1: Distinguish between different automation systems available for residential application.
CO2: Develop own Bluetooth operated home automation system
CO3: Compare different networking systems its advantages and disadvantages.
CO4: Examine various techniques in developing and installing detectors and alarm systems
CO5: Prepare a basic layout for a project based on automated systems.

TEXT / REFERENCE BOOKS

1. Gerard O'Driscoll, In the Essential Guide to Smart Home Automation Safety & Security.
2. O'Driscoll Essential Guide to Smart Bulbs & Lighting Control Essential Guide to Smart Home Entertainment James Gerhart, Home Automation & Wiring.
3. Nick-Vandome, Smart Homes in easy steps: Master smart technology for your home
4. Donald Norris, Home Automation with Raspberry Pi: Projects Using Google Home, Amazon Echo, and Other Intelligent Personal Assistants.
5. https://www.se.com/in/en/work/products/product-launch/smart-home-automation-wiser/
6. https://www.security.org/home-automation/

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hrs**.

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks : 04 x 15 = 60 Marks

SARA3501	BIOMIMICRY	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To explore, understand and recognize the relation between nature and human.
- To comprehend and appreciate the natural construction by the organisms in nature.
- To generate similar approaches from nature in the built forms.

UNIT I INTRODUCTION **6 Hrs.**

Introduction- what is biomimicry - bionics - biomimetics - origins of biomimicry - Biomimicry vs biophilic -nature's laws, strategies, and principles - Nature as a model, measure and mentor, changing metaphor and approach organic architecture - animal architecture - complexity of natural organisms and systems - Relationship between nature and architecture.

UNIT II BIOMIMICRY CONCEPTS **8 Hrs.**

Nostos Erda: Returning Home to Earth - Natural materials manufacture principles - Inorganic materials - crystallized version of Earth derived materials - Natural construction - adaptation for human use (mud-dauber wasp compass termites, Eastern tent caterpillars, female bauble spiders and the extraordinary Namibian fog-basking beetle, beaver dam construction).

UNIT III BIOMIMICRY IN ARCHITECTURE **6 Hrs.**

Biomimicry in architecture - overlap between biology and architecture - living building - biomimetics concepts - emerging biomimetics-technologies - nanotechnology in architecture - biomimetics products.

UNIT IV BIOMIMICRY AND SUSTAINABILITY **6 Hrs.**

Examples of Buildings - works of Douglas Cardinal, ImreMakovecz, Daniel Liebermann, Eugene Tsui, Jacques Gillet, Petra Gruber - Biomimetic Cities-Biomimetic future Approach- Levels of Biomimicry (organisms level, behaviour level, ecosystem level) - Nature model - New applications of biological life into Architecture.

CONSTRUCTIVE ASSIGNMENTS **4 Hrs.**

Assignment on the concepts of biomimicry by reviewing journal papers. Documenting the influence of Biomimicry in Architecture. Analysis of case studies of various architects- Ar. Michael Pawlyn, Ar. Mick Pearce, Ar.Santiago Calatrava.

Max. 30 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Understanding the origin and principles of biomimicry and able to distinguish its application in architecture.

CO2: Synthesize the different ways of construction with earth in comparison with the construction in the animal kingdom.

CO3: Exploration and critical analysis of the principles, design approaches of biomimicry adopted in architecture.

CO4: Ability to outline the technologies and design strategies by adopted by pioneers in the built form..

CO5: Skill to interpret philosophies in a sustainable approach adopted by architects in different contexts.

CO6: Constructing knowledge on the role of nature as a model, measure and mentor in architecture.

TEXT / REFERENCE BOOKS

1. Benyus, J. M. (2002). Biomimicry: Innovation Inspired by Nature. William Morrow.
2. Gruber, P. (2011). Biomimetics in Architecture: Architecture of Life and Buildings. Springer.
3. Hansell, M. (2005). Animal Architecture (Oxford Animal Biology Series). OUP Oxford.
4. Mazzoleni, I. (2013). Architecture Follows Nature-Biomimetic Principles for Innovative Design (Biomimetics). CRC Press.
5. Pawlyn, M. (2011). Biomimicry in Architecture. RIBA Publishing.

WEBSITES

1. https://biomimicry.org/resources/
2. https://biomimicry.net/

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks : 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks : 08 x 05 = 40 Marks

PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks : 04 x 15 = 60 Marks

SARA3504	ENVIRONMENT AND PSYCHOLOGY	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To expose the relationship between man and his larger environment, with special emphasis on aspects that are likely to affect intervention in or creation of the built environment.
- To familiarize the students with basic concepts/ theories of psychology as relevant to architecture.
- To analyse the human dimension of environmental sustainability from psychological perspectives

UNIT I INTRODUCTION **8 Hrs.**

Introduction to the discipline environmental psychology, its importance in the field of architecture, understanding the principles of psychology, the roots and Edges of environmental psychology- Theories and approaches in Environmental Psychology. Emotional Relationships to Place: Attachment & Identity

UNIT II BASIC ATTENTION PROCESSES AND MEMORY **7 Hrs.**

Models of Attention - Automization and Attention. The Use of Knowledge - Memory and built environment- theories on different types of memories - Retrieval from Long-Term Memory - Models of Semantic Memory - Basics of Visual Memory - Object Transformation in Visual Memory.

UNIT III PERCEPTION **8 Hrs.**

Sensory Mechanisms and Concept of perception, Role of Culture in Perception - visual perception, theories on environmental perception- Gestalt Principles - environmental perception and design. Concepts of cognition. Environmental cognition and design. Environment and human response in relation to different environmental variables. Classical Theory of Decision Making and Prospect Theory of Decision Making

UNIT IV SPACE AND HUMAN BEHAVIOR **7 Hrs.**

The Density/Crowding Distinction - Crowding and Density Human Experimental Studies –Physiological reactions – Task performance, Social-affective responses - Crowding in everyday settings – The residence - Recreational areas - Hospitals - Prisons. Concept of personal spaces, personal space and human behavior. Personal space and environmental design. Concept of territoriality, territoriality and human behavior & territoriality and environmental design. Residential environment- Concept of Home. Neighborhood concept & Neighborhood satisfaction. Place attachment theory, Workplace environment and behavior. Application of the knowledge in design of a residence, community neighborhood and other built environments.

CONSTRUCTIVE ASSIGNMENTS

Documentation of Human Preferences in public spaces through various survey techniques.

Max. 30 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Explore and understand various perspectives on human-environment interrelationships

CO2: Relate the impact of space on human behaviour

CO3: Develop clear knowledge on memory and attention

CO4: Evaluate the role of perception and cognition in shaping human responses

CO5: Build a systematic evaluation of the built environment in relationship to the act of socialising

CO6: Apply the acquired knowledge through case evaluations.

TEXT / REFERENCE BOOKS

1. Morgan, T., &Clifford, Introduction to Psychology, Tata McGraw-Hill Publications, New York,2001
2. Robert,G. (2002). Environmental Psychology: Principles and Practice, Optimal books, 2002.
3. Devlin, A. S. (2018). Environmental Psychology and Human Well-being: Effects of Built and Natural Settings. Academic Press.
4. Bell, P. A., Greene, T. C., Fisher, J. D., & Baum, A. (1996). *Environmental psychology*. Harcourt.
5. Mehrabian, A., & Russell, J. A. (1974). An approach to environmental psychology. the MIT Press.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks : 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks : 08 x 05 = 40 Marks

PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks : 04 x 15 = 60 Marks

SARA3701	ART AND ARCHITECTURE	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To appreciate the various art forms and the diverse manifestations in built forms and environment.
- To critically understand the conceptual ideas evolved by architects with art as the source of inspiration.
- To appraise the strategies adopted to enhance congregation spaces with arts.

UNIT I INTRODUCTION TO ART-CHITECTURE **4 Hrs.**

Definition of Art, Theory of origin and evolution, Different Art Forms – visual, auditory, tactile and exuberance, connection between art and architecture

UNIT II TANGIBLE ART AND ARCHITECTURE **10 Hrs.**

Tangible art forms - Art Movements- Art nouveau, Realism, Impressionism, Expressionism, Cubism, Futurism, Constructivism, Abstract Art-Theory of Abstraction by Kandinsky and Mondrian, Surrealism, Minimalism, Manifestations of art movements in architecture, Expressions of grammar evolved from tangible art in architecture and interiors

UNIT III INTANGIBLE ART AND ARCHITECTURE **8 Hrs.**

Intangible art - performing arts - dance, music, theatre - manifestation of such art forms in architecture - Architectural language evolved with music, dance and theatre as the source of inspiration developed by architects in the built environment - symbolism and metaphors in the built form and environment

UNIT IV ROLE OF ART IN CONGREGATION SPACES **7 Hrs.**

Role of art forms in urban space recognition, Aesthetics of art museum design, Art in worshipping areas, parks, squares and plazas, other congregation spaces

CONSTRUCTIVE ASSIGNMENTS **4 Hrs.**

Literature studies of diverse design processes evolved by contemporary architects with a focus on both tangible and intangible arts as a channel to creativity.

Max. 30 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Outline the various tangible and intangible art forms, expressions and the connection with architecture

CO2: Analyse the different ways through which the conceptual ideas derived from art forms in architecture

CO3: Synthesize the conceptual ideas developed by architects from art movements

CO4: Interpret the directions adopted to evolve notions and ideas from intangible art

CO5: Develop ways to use art expressions to enhance the quality of congregation spaces

CO6: Construct strategies to address art as a source of inspiration to evolve generic ideas in both built forms and environments.

TEXT / REFERENCE BOOKS

1. Steiner, R. (1999). Architecture as a Synthesis of the Arts, Rudolph Steiner press
2. Antoniades, A. C. (1992). Poetics of architecture: theory of design. New York: Van Nostrand Reinhold.
3. Paul Crowther, defining art creating the canon: artistic value in an era of doubt, Oxford publishers, 2011
4. Aro, S. (2003). Art and architecture. In the Luwians (pp. 281-337). Brill.
5. Helguera, P. (2011). Socially engaged art. New York, NY: Jorge Pinto Books.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks : 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks: 08 x 05 = 40 Marks

PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks: 04 x 15 = 60 Marks

SARA3702	ARCHITECTURAL PHOTOGRAPHY AND JOURNALISM	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To make students aware about Architectural Journalism
- To encourage them to pursue Architectural Critiquing, Writing, Documentation and Research.
- To familiarize students in preparation of Book Reviews and Articles, with Photographs to support their work.

UNIT I INTRODUCTION TO ARCHITECTURAL JOURNALISM **4 Hrs.**

Key concepts and objectives of Journalism; Theories of journalism, techniques and processes. Skills for contemporary architectural reportage: documentation, research, reporting, writing, editing, photography, columnists, interviewing, networking, public relationships, critiquing & criticism, media & publishing. Regional, National and International discussion forums, Discussions on topics needed in an architectural journal and current issues; Types of journals, works of key architectural journalists.

UNIT II ARCHITECTURAL WRITING AND CRITICISM **10 Hrs.**

Introduction to various types of writing- News stories, critical essays on particular buildings, social issues, etc. Interviewing techniques, Argument and debate; critical thinking, evidence, proof, refutation, persuasion; Editing for print and web - Text preparation, formatting, page composition, Mode of presentation, Standards and Guidelines for documentation, Code of ethics, Basic knowledge on Press laws, Press Council of India, Multimedia/online journalism and digital developments. Introduction importance of Criticism. Relationship between Architecture and Criticism, Criticism and social commentary. Failures of Architectural Criticism. Analysis of various critical themes and their comparison, criticizing the built environment in various aspects and writing about criticism. Seminars on Indian architectural writers, journalists and critics.

UNIT III PHOTOGRAPHIC TECHNIQUES **8 Hrs.**

Introduction to architectural photography: concepts of colour, lighting, distance, visual angle and perspective, Framing and composition: Visual weight, Rule of thirds, Leading lines, Symmetry, Abstraction; Context, Subject, Background and foreground relationships. Technical definitions and settings; Types of cameras and lenses, properties and priorities; Shooting parameters, Exposure, Aperture, Shutter Speed, ISO; Use of various post processing tools and controls; printing techniques.

UNIT IV PHOTOJOURNALISM **6 Hrs.**

Analysis of subject and content, Photo-documentation techniques for buildings highlighting quality of architectural spaces. Supporting the write-ups about the built environment with photographs, Understanding pictorial, verbal and visual relationship of architecture journalism. Expression and Imagery, Time and space in Image

CONSTRUCTIVE ASSIGNMENTS **2 Hrs.**

Writing Case studies, book reviews, literature reviews- Analysis of newspaper, magazine, or website articles and students will have to respond with their own piece of writing- Evaluation of historical and contemporary examples of written and journalistic criticism of architecture, analysis of major critical themes - Presentations, discussions and debates on works of Indian and international writers and critics - Looking at and explaining a building in today's scenario and what is happening now and what should be the future, reflecting on and criticizing architectural projects - Writing about the new technologies and construction techniques in today's architecture - Students will be assessed by the quality of their writing, the level of understanding they bring to the readings and topics, and the quality of their in-class presentations and participation.

Max. 30 Hrs.

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Understand importance of analysing architecture and its interpretation through journalism.

CO2: Structure architectural journals, write descriptive and analytical reports, edit write ups, book reviews, page compositions and printing processes

CO3: Analyse recent historical and contemporary examples of written and journalistic criticism of architecture, including selected writings by Indian and overseas critics

CO4: Distinguish major critical themes and thematic categories in historical and contemporary architectural writing.

CO5: Apply elements and principles of architectural photographic work that effectively communicates ideas.

CO6: Post-process digital images to create various outcomes.

TEXT / REFERENCE BOOKS

1. Bender, T. (1988). Architecture and the Journalism of Ideas. *Design Book Review*, (15), 47-49
2. Waugh, P., & Fuller, D. (Eds.). (1999). The arts and sciences of criticism. Oxford University Press
3. Al-Asad, M., Musa, M., & Aga Khan Trust for Culture. (2006). Architectural criticism and journalism: global perspectives: proceedings of an international seminar organised by the Aga Khan Award for Architecture in association with the Kuwait Society of Engineers, 6-7 December 2005, Kuwait. Aga Khan Trust for Culture.
4. Fisher, T. (2011). The death and life of great architecture criticism. Places Journal.
5. Wiseman, C. (2014). *Writing Architecture: A Practical Guide to Clear Communication about the Built Environment*. Trinity University Press.
6. Heinrich, M. (2017). Basics Architectural Photography. Birkhäuser.
7. Harris, M. G. (2002). *Professional architectural photography*. Taylor & Francis.

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks : 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks : 08 x 05 = 40 Marks

PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks : 04 x 15 = 60 Marks

SARA3904	FACILITIES PLANNING	L	T	P	Credits	Marks
		2	0	0	2	100

COURSE OBJECTIVES

- To outline the need and importance of facilities planning, in modern context.
- To appreciate the scope of architects in the field of facility planning
- To understand the nature of duties to be performed at various phases of the project.
- To articulate the responsibilities of ensuring functionality & value appreciation

UNIT I FUNDAMENTALS OF FACILITIES PLANNING **8 Hrs.**

Principle duties of a facility manager - Diverse responsibilities - Architectural Programming - Difference between primary data & Secondary data, various stages involved in planning viz., goal/objective setting, surveys & Studies, analysis, findings & recommendations, implementation, monitoring & evaluation and feedback - Various sources of information - Project scheduling and phasing

UNIT II FACILITIES DESIGN AND SPACE PLANNING **6 Hrs.**

Applications of facilities design - Understanding the Project Development process - Flexibility and facilities planning - Optimal space planning and cost minimization through facility layout - Study of design sources - Factors, affecting and influencing the site - Process of site analysis.

UNIT III FACILITY PLANNING FOR THE CONSTRUCTION PHASE **6 Hrs.**

Functionality of Building Automation systems - Recording operating costs, safety concepts, energy supply & waste management - Knowledge based facility planning and decision support system - Artificial intelligence - Simulation in facility planning and efficiency analysis

UNIT IV FACILITY PLANNING FOR HANDOVER & FACILITY PLANNING **6 Hrs.**

Delivery of the project - Data transfer, user satisfaction, Facilities Planning options - Owner management, Outsourced management, owner management with outsourced labor & purchase of separate management, Ensuring functionality & value appreciation.

CONSTRUCTIVE ASSIGNMENTS **4 Hrs.**

Demonstrate comprehensive understanding of the roles and responsibilities of a facility manager via site visits, preparation of PPT / documentation and class presentations..

Max. 30 Hrs

COURSE OUTCOMES

On completion of the course the student will be able to

CO1: Understand the key activities and extended roles of a facility manager.
CO2: Outline the Architectural program of facility, and its impact on efficiency.
CO3: Understand the process of facility planning, for site conditions and cost optimization.
CO4: Understand the functioning and multiple-integration of various building systems interiors.
CO5: Outline closure activities and related stakeholder management at all phases outlets.
CO6: Comprehend the roles and responsibilities of a facility manager via site visits

TEXT / REFERENCE BOOKS

1. Haugen, T., Alexander, K., Atkin, B., &Brochner, J. (Eds.). (2004). Facilities Management: Innovation and Performance. Taylor & Francis.
2. Roper, K., &Payant, R. (2014). The facility management handbook. Amacom.
3. Payant, R. P., & Lewis, B. T. (2007). Facility Manager's Maintenance Handbook second edition, Mc.
4. Alexander, K., Atkin, B., Bröchner, J., & Haugen, T. (Eds.). (2004). Facilities management: innovation and performance. Routledge.Johann Eisele Ellen Kloft, High Rise Manual, BirkhauserVerlag AG, 2003
5. Teicholz, E. (2001). Facility design and management handbook. McGraw Hill Professional.
6. Booty, F. (2009). Facilities management handbook 4th edition., Elsevier
7. Atkin, B., & Brooks, A. (2015). Total facility management. John Wiley & Sons

END SEMESTER EXAM QUESTION PAPER PATTERN

Max. Marks : 100 **Exam Duration: 3 Hrs.**

PART A: 2 questions each from unit 1 to unit 4, each carrying 5 marks : 08 x 05 = 40 Marks
PART B: 1 question each from unit 1 to unit 4 with an internal choice, each carrying 15 marks : 04 x 15 = 60 Marks