SNDT Women's University, Mumbai

Bachelor Of Science (Resource Management & Interior Design)

B.Sc. In Resource Management & Interior Design

As Per NEP – 2020

Semester – III & IV

Syllabus

(WEF. 2025-2026)

Structure with Course Titles (Revised May 2024)

SN	Courses	Type of Course	Credits	Marks	Int	Ext
	Semester III					
30130811	Elements of Planning & Drafting (2+2)	Major (Core)	4 = 2+2	100	50	50
30130822	AutoCAD (Pr)	Major (Core)	4	100	50	50
30130813	Design Thinking for Interior Innovation (Th/Pr)	Major (Core)	4 = 2+2	100	50	50
30330811	Home Wellness Design (Th)	Minor Stream	2	100	0	50
30430811	Consumer Rights, Behaviour, and Redressal Strategies (Th)	OEC	2	50	0	50
		AEC (Modern Indian Language)	2	50	50	0
31330801	Material Market Survey (Pr)	FP	2	50	50	0
		CC	2	50	50	0
			22	**550**	**300**	**250**
SN	**Courses**	**Type of Course**	**Credits**	**Marks**	**Int**	**Ext**
	Semester IV					
40130811	Planning & Designing (Th)	Major (Core)	4	100	50	50
40130822	Residential Planning and Detailing (Pr)	Major (Core)	4	100	50	50
40130823	Construction Techniques (Pr)	Major (Core)	4	100	50	50
40430811	LivingCraft: The Art of Furniture Design (Th)	OEC	2	50	0	50
40730821	Art & Artifacts (Pr)	SEC	2	50	0	50
		AEC(Modern Indian Language)	2	50	0	50
41530801	Waste Management Practices in Communities/Wise to Waste	CE	2	50	50	0
		CC	2	50	50	0
			22	**550**	**250**	**300**

Exit with UG Diploma with 4 extra credits (44 + 4 credits)

Semester III

3.1 Major (Core)

Course Title	**Elements of Planning and Drafting –(Th/Pr)**
Course Credits	2+2
Course Outcomes	Upon completion of the course, learners will be able to
	1. Comprehend housing types, site selection, and residential planning principles.
	2. Apply design principles for planning and furnishing residential interiors.
	3. Develop technical skills in architectural drafting and interior design drawing.
	4. Interpret and create plans, elevations, and sections for residential spaces.
	5. Integrate lighting, furniture, and basic services into residential interior layouts.
	6. Demonstrate knowledge of sustainable and ergonomic design principles.
Module 1: Housing & Basic Drafting Skills (1 Credit)	
Learning Outcomes	Upon completion of the module, learners will be able to
	1. Analyze housing needs and types.
	2. Interpret site selection criteria and loan systems.
	3. Apply basic drafting conventions and lettering styles.
	4. Use drawing tools, scales, and symbols with accuracy.
Content Outline	1) Housing types, housing loans, site selection 2) Principles of planning: orientation, zoning, privacy, etc. 3) Drafting tools, types of lines, lettering, dimensioning 4) Basic geometry and scale drawing
Module 2: Residential Space Design & Orthographic Projection (1 Credit)	
Learning Outcomes	Upon completion of the module, learners will be able to
	1. Plan layouts for residential spaces (living, kitchen, bedroom, bath).
	2. Apply orthographic projection techniques.
	3. Develop room-wise space planning and elevations.
	4. Apply designing principles to designing of different houses.

Content Outline	• Planning of living, dining, kitchen, bedrooms, bathrooms • Kitchen layouts and work zones • Orthographic projections of basic and combination objects • Isometric and axonometric views
Module 3: Furniture, Lighting & Interior Layouts (1 Credit)	
Learning Outcomes	Upon completion of the module, learners will be able to
	1. Comprehend furniture types, selection principles, and arrangement.
	2. Apply lighting design principles and select suitable fixtures.
	3. Create detailed layout plans and 3D views.
Content Outline	• Indoor/outdoor furniture types, ergonomic design • Lighting terms, types, systems, fixtures, and layout planning • Rendering techniques (pen-ink, graphite, color pencil) • Plans and elevations for living room, kitchen, bedroom, toilet
Module 4: Services & Documentation (1 Credit)	
Learning Outcomes	Upon completion of the module, learners will be able to
	1. Identify basic services and integrate them into design.
	2. Create electrical, plumbing, flooring, and ceiling plans.
	3. Conduct market surveys and prepare technical documentation.
	4. Apply the lighting principles to residential space design
Content Outline	• Lighting symbols and layouts • Sanitary fixtures and plumbing basics • Reflected ceiling plans, flooring design layouts • Room documentation, client requirements, and photography

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

Evaluation Pattern

Internal Assessment – CCE (50 Marks)

- Drafting sheets (line, lettering, scale drawing): 10 marks
- Furniture drawings, orthographic/isometric views: 10 marks
- Room-wise documentation and layouts: 10 marks
- Lighting and services plans with market survey: 15 marks
- Sketchbook: 5 marks

External Exam (50 Marks)

Reference Books

1. Ching, F. D. K. (2015). Architectural graphics (6th ed.). Wiley.
2. Ching, F. D. K., Jarzombek, M. M., & Prakash, V. (2011). A global history of architecture (2nd ed.). Wiley.
3. De Chiara, J., Panero, J., & Zelnik, M. (2001). Time-saver standards for interior design and space planning (2nd ed.). McGraw-Hill.
4. D'Costa, A. P. (2012). Elements of town and country planning. CBS Publishers & Distributors.
5. Gill, R. (2008). Rendering with pen and ink. Dover Publications.
6. Krishnamurthy, K. A. (2007). An introduction to building drawing. Charotar Publishing House.
7. Neufert, E., & Neufert, P. (2012). Architects' data (4th ed.). Wiley-Blackwell.
8. Rao, M. P. (2007). Drafting and design for architecture. The English Press.
9. Rapoport, A. (1969). House form and culture. Prentice-Hall.
10. Unwin, S. (2009). Analysing architecture (3rd ed.). Routledge.

3.2 Major (Core)

Course Title	**AutoCAD - I (Pr)**
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	1. **Identify and describe** fundamental AutoCAD interface elements, commands, and basic 2D drawing tools.
	2. **Explain** the purpose and functionality of drafting tools, layers, object properties, and annotation features within AutoCAD.
	3. **Apply** AutoCAD commands to create accurate 2D drawings, modify objects, and organize content using layers and object properties.
	4. **Differentiate** between drafting techniques, scaling methods, and precision tools used for complex technical drawings.
	5. **Evaluate** the accuracy, efficiency, and compliance of 2D drawings with industry standards and best practices.
	6. **Create** professional-quality 2D design layouts and technical documentation using advanced AutoCAD tools and techniques.
Module 1(Credit 1)	**INTRODUCTION TO AUTO CAD**
Learning Outcomes	After learning the module, learners will be able to
	1. Set Up and Navigate the AutoCAD Environment
	2. Work Effectively with AutoCAD Tools and Tracking Features
	3. Achieve Drawing Precision and Accuracy
	4. Apply multiple methods of object selection for targeted editing.
Content Outline	**GETTING STARTED WITH AUTOCAD** • Creating a Custom Workspace Using the Keyboard Effectively • Object Creation, Selection and Visibility • Working in Multiple Drawings • Copying and Pasting Between Drawings • Using Grips Effectively **WORKING EFFECTIVELY WITH AUTOCAD** • Using Running Object Snaps • Using Object Snap Overrides • Polar Tracking at Angles • Object Snap Tracking • Coordinate Entry • Locating Points with Tracking • Construction Lines • Placing Reference Points **DRAWING PRECISION IN AUTOCAD AND ACCURATE POSITIONING** • Drawing Lines

	• Erasing Objects • Drawing Lines with Polar Tracking • Drawing Rectangles • Drawing Circles • Undo and Redo Actions **MAKING CHANGES IN YOUR DRAWING** • Selecting Objects for Editing • Moving Objects • Copying Objects • Rotating Objects • Scaling Objects • Mirroring Objects • Editing with Grips
Module 2(Credit 1)	**DRAWING ORGANISATIONS AND CREATING LAYOUTS**
Learning Outcomes	1. Organize Drawings Using Layers
	2. Extract and Analyze Information from Drawings
	3. Draw and Modify Advanced Object Types
	4. Set Up Layouts and Prepare Drawings for Printing
Content Outline	**ORGANIZING YOUR DRAWING WITH LAYERS** • Understanding Layer Property manager (creating new layer and layer utilities) • Layer Status • Changing an Object's Layer and its various properties **Getting INFORMATION FROM YOUR DRAWING** • Working with Object Properties • Measuring Objects **ADVANCED OBJECT TYPES AND EDITING COMMANDS** • Drawing Arcs • Drawing and editing Polylines • Drawing Polygons • Drawing Ellipses • Trimming and Extending Objects • Stretching Objects • Creating Fillets and Chamfers • Offsetting Objects • Creating Arrays of Objects **SETTING UP A LAYOUT AND PRINTING YOUR DRAWING** 1. Printing Concepts 2. Working in Layouts 3. Copying Layouts 4. Creating Viewports 5. Guidelines for Layouts 6. Printing Layouts with layer and colour management 7. Printing from the Model Tab
Module 3(Credit 1)	**BLOCK AND LAYOUT SETTINGS**

Learning Outcomes	1. Create and Manage Blocks
	2. Format Drawings with Annotations, Text, and Tables
	3. Apply Hatching and Gradient Patterns
	4. Add and Modify Dimensions
Content Outline	**BLOCKS** • Creating blocks of furniture • Making and Inserting Blocks • Working with Dynamic Blocks • Inserting Blocks with Design Center • Inserting Blocks with Content Explorer **FORMATTING, ADDING TEXT AND TABLES** • Working with Annotations • Adding Text in a Drawing • Modifying and Formatting Multiline Text • Adding Notes with Leaders to Your Drawing • Creating and Modifying Tables **INSERTING, HATCHING AND GRADIENT** • Inserting Hatching and gradient - Hatching by pick point and object • Editing Hatches • Scaling of Hatch and rotating hatch pattern **ADDING DIMENSIONS** • Dimensioning Concepts and formatting in architectural units as well as decimal units • Adding Linear, Radial and Angular Dimensions • Adding Continue Dimensions, Angle specification, Arc specification, marking center points, etc. • Editing Dimensions • Scaling the Dimension as per the drawing and enlargement / reduction in size
Module 4(Credit 1)	**Block and layout settings**
Learning Outcomes	After learning the module, learners will be able to
	1. Describe the fundamental concepts of **3D modeling** in AutoCAD and Navigate the 3D Environment
	2. Apply 3D Modifying and Editing Commands
	3. Extract and Use Information from 3D Models
	4. Generate Working Drawings from 3D Models
	5. Render and save high-quality images suitable for presentations and client approvals.
Content Outline	**INTRODUCTION TO 3D** • Knowing to 3D • Working in 3D • Setting of view ports and understanding • Creating surface modeling • Creating Solid Primitives

	• Creating composite Solids • Creating Models from Cross Sections **3D MODIFYING COMMANDS** • Editing Solid Models • 3D rotate, move, copy, align, array, converting to solid or surface commands • Adding Detail to Your Solid Models **EDITING MODELS** • Converting Objects • Extracting Geometry from Solid Models • Changing the Model Position • Duplicating the Model • Getting Information from 3D Object **WORKING DRAWINGS AND 3D OBJECTS** • Section a Solid Model and Generate 2D Geometry • Working with Layouts • Creating Drawings from 3D Models **RENDERING AND SAVING RENDERED IMAGES** • Setting Perspective / isometric views and rendering it in to different visual styles • Applying materials to solids and changing its properties • Applying lights to space and changing its fall of light and intensity • Adding landscape to the drawing • Rendering and saving the images

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):

INTERNAL ASSESSMENT: CCE- 50 MARKS

Module 1 : 10 marks

- Creating various design Patterns and shapes by using commands:
- Line, poly line, circle, ellipse, polygon etc.
- Creating shapes by using commands: spline, ellipse and sketch commands
- Creating furniture in plan mode with specified dimensions: Table, sofa, chair, bed, toilet accessories, wardrobe, etc.
- To create new objects by copying and modifying the previously made objects

Module 2 : 10 marks

- Drafting various room layouts
    - Measurement layout
    - Furniture layout
    - Flooring layout
    - False ceiling layout
    - Creating 2D elevations

Module 3 : 15 marks

- Creating furniture block library
    - Inserting text, dimensions, tables, and specification to the assignments made for Module 2 -Adding hatching, gradation, Text, Dimension, Table

Module 4: 15 marks

- Single room with furniture in 3D should be prepared
    - Extrusion of structural element
    - Furniture making in 3D form
    - Applying materials
    - Applying lights
    - 2 perspective view

EXTERNAL ASSESSMENT- FINAL EXAM OF 50 MARKS

References:

1. Architecture 2013 Bundle, AutoCAD Architecture 2013, AutoCAD MEP 2013, Navisworks 2013, Raster Design 2013
2. Auto CAD Release II , Auto Desk, ISBN: 9780201623093
3. AutoCAD 2013 Bundle, AutoCAD Introduction 2013, AutoCAD Advanced 2013, Raster Design 2013, AutoCAD Update 2013
4. B K Goel, P K Goel (2011): Engineering Graphics (With AutoCAD) ISBN: 9788190738620
5. Bertol, Daniela (2004): Visualizing with CAD: An Auto CAD Exploration of Geometric and Architectural Forms, , ISBN: 0387942750 / 0-387-94275-0
6. Bride, Mac, Teach Yourself Auto CAD (2007) , ISBN: 007149085X / 0-07-149085-X
7. Civil 3D 2013 Bundle, Civil 3D Introduction 2013, Civil 3D Advanced 2013, Map 3D 2013, Navisworks 2013, Raster Design 2013
8. P B Sinha, AutoCAD 2006 Engineering And Architectural Drawing Handbook, ISBN: 9788178842769
9. S Rai & R Ghosh (2009): Computer Awareness, ISBN: 8185749558
10. S. Mehta, Auto CAD Release 13- For DOS/Win. Quick Ref. Guide, IIBF No.: 48462
11. Teach Yourself Auto CAD 2007 (Teach Yourself) ISBN: 9780071490856
12. The Auto Cad 2002 Workbook: A Complete Educational and Training Guide for Mastering 2d Applications of AutoCAD 2002, ISBN: 9781588741516
13. Vaishwanar Lakshminarayanan (2007): Engineering Graphics, ISBN: 8186321691

3.3 Major (Core)

Course Title	**Design Thinking for Interior Innovation (Th/Pr)**
Course Credits	2+2
Course Outcomes	After going through the course, learners will be able to
	1. Apply design thinking methods to interior design problems.
	2. Comprehend user needs through empathy and observation.
	3. Generate innovative ideas and translate them into prototypes.
	4. Develop critical thinking, creativity, and collaboration skills.
	5. Apply human-centered approaches to real-world interior design challenges.
Module 1 (Credit 1) : Foundations of Design Thinking (Th)	
Learning Outcomes	After learning the module, learners will be able to
	1. Explain the origins, philosophy, and evolution of Design Thinking as a creative problem-solving methodology.
	2. Identify and describe key principles such as empathy, collaboration, and iteration as applied to design processes.
	3. Comprehend and articulate the five stages of the Design Thinking process and how they interrelate.
	4. Differentiate between Design Thinking and traditional problem-solving approaches, especially within the context of interior design.
	5. Recognize the significance and application of Design Thinking in creating user-centered interior environments.
Content Outline	**Foundations of Design Thinking (Th)** 1) Introduction to Design Thinking: Definition & History 2) Key Principles: Empathy, Collaboration, Iteration 3) The 5-Stage Process: Empathize, Define, Ideate, Prototype, Test 4) Design Thinking v/s Traditional Problem Solving 5) Relevance to Interior Design **Module 1: Empathy in Action – Observing Users (Pr)**

	• Field Visits: Residential/Community/Commercial Spaces • Interviewing Users: Space Use, Comfort, Pain Points • Creating Empathy Maps • Assignment: Redesigning a user's workspace based on findings
Module 2 (Credit 1) – Empathy and User-Centric Research	
Learning Outcomes	After learning the module, learners will be able to
	1. Analyze user behaviour and spatial needs through observation and interaction within different interior environments.
	2. Apply empathy mapping techniques to translate user insights into actionable design criteria.
	3. Conduct structured interviews and field research to gather qualitative data from real users.
	4. Identify and articulate pain points and user challenges in interior spaces.
	5. Translate user-centric findings into meaningful problem statements for interior design innovation.
Content Outline	**Empathy and User-Centric Research (Th)** 1) Understanding User Behaviour & Needs 2) Observation Techniques & Empathy Mapping 3) Conducting Interviews & Field Studies 4) Identifying Pain Points in Interior Spaces **Module 2: Define the Challenge: Framing Insights (Pr)** • Group Activity: Synthesizing observations • Creating Problem Statements & How-Might-We Questions • Developing User Personas • Assignment: Create a Journey Map and Problem Definition Board
Module 3 (Credit 1) : Defining & Ideating Design Challenges (Th/Pr)	
Learning Outcomes	After learning the module, learners will be able to
	1. Synthesize user research findings to identify key insights relevant to interior design challenges.
	2. Create detailed user personas and journey maps to visualize user experiences and expectations.
	3. Formulate precise problem statements (POVs) based on user needs and contextual understanding.

	4. Apply diverse ideation techniques (such as brainstorming, SCAMPER, and mind mapping) to generate innovative design solutions.
	5. Evaluate initial ideas critically to ensure alignment with user needs and project goals.
Content Outline	**Defining & Ideating Design Challenges (Th)** 1) Synthesizing Research Findings 2) Crafting User Personas & Journey Maps 3) Defining Problem Statements (POVs) 4) Ideation Techniques: Brainstorming, SCAMPER, etc. **Module 3: Ideation Lab: Generating Interior Concepts (Pr)** • Brainstorming sessions • Sketching initial layout and functional ideas • Building Mood Boards and Material Palettes • Assignment: Present multiple interior concepts for one challenge
Module 4 (Credit 1) – Prototyping & Testing in Interior Design	
Learning Outcomes	After learning the module, learners will be able to
	1. Demonstrate an understanding of various prototype types such as mood boards, conceptual sketches, and physical models relevant to interior design.
	2. Conduct user testing and gather constructive feedback to evaluate the effectiveness of design ideas.
	3. Apply iterative thinking by refining prototypes based on user input and design objectives.
	4. Analyze real-world case studies to understand the impact of prototyping and testing in successful interior design outcomes.
	5. Develop user-validated design solutions through hands-on experimentation and critical reflection.
Content Outline	**Prototyping & Testing in Interior Design (Th)** 1) Types of Prototypes: Mood Boards, Sketches, Physical Models 2) Testing with Users: Gathering Feedback 3) Iterative Thinking and Redesign 4) Real-World Case Studies in Design Thinking Applications **Module 4: Prototype and Test: Bringing Ideas to Life (Pr)** • Creating scaled physical or digital prototypes

	• Peer & user testing of models • Collecting feedback and refining design • Final Project: End-to-end design thinking solution for a space (e.g., multipurpose room, reading corner, small studio)

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

Continuous assessment based on Projects / Practical's

Evaluation Pattern

Module -1: Practical Work:

- Field Visits: Residential/Community/Commercial Spaces
- Interviewing Users: Space Use, Comfort, Pain Points
- Creating Empathy Maps

a) Assignment: Redesigning a user's workspace based on findings

Module -2: Practical Work:

- Group Activity: Synthesizing observations
- Creating Problem Statements & How-Might-We Questions
- Developing User Personas

a) Assignment: Create a Journey Map and Problem Definition Board

Module -3: Practical Work:

- Brainstorming sessions
- Sketching initial layout and functional ideas
- Building Mood Boards and Material Palettes

a) Assignment: Present multiple interior concepts for one challenge

Module -4: Practical Work:

- Creating scaled physical or digital prototypes
- Peer & user testing of models
- Collecting feedback and refining design

a) Final Project: End-to-end design thinking solution for a space (e.g., multipurpose room, reading corner, small studio)

Evaluation Pattern (Total: 100 Marks)

Component	Weightage	Description
Module 1: Foundations of Design Thinking	15 Marks	Concept-based assessment (MCQs, short answers, comparisons, reflective journal)
Module 2: Empathy & User-Centric Research	20 Marks	Fieldwork, user interviews, empathy maps, pain-point identification report
Module 3: Defining & Ideating Challenges	20 Marks	Creation of user personas, journey maps, problem statements, ideation sketches
Module 4: Prototyping & Testing	25 Marks	Prototype creation, user testing feedback, iteration logs, case presentation
Final Project / Portfolio Submission	15 Marks	Integration of all modules into a cohesive design project or process journal
Class Participation & Peer Review	5 Marks	Collaboration, critique, contribution to group work and idea exchange
Total	**100 Marks**	

Reference Books

1. Brown, T. (2009). Change by design: How design thinking creates new alternatives for business and society. Harvard Business Press.
2. Cross, N. (2011). Design thinking: Understanding how designers think and work. Bloomsbury Academic.
3. Doorley, S., Holcomb, S., Klebahn, P., Segovia, K., & Utley, J. (2018). Design thinking bootleg. Stanford d.school. https://dschool.stanford.edu/resources/design-thinking-bootleg
4. Kuratko, D. F., Goldsworthy, M., & Hornsby, J. S. (2012). Innovation acceleration: Transforming organizational thinking. Pearson Education.
5. Lawson, B. (2006). How designers think: The design process demystified (4th ed.). Architectural Press.
6. Lidwell, W., Holden, K., & Butler, J. (2010). Universal principles of design (2nd ed.). Rockport Publishers.
7. Martin, R. (2009). The design of business: Why design thinking is the next competitive advantage. Harvard Business Press.
8. Norman, D. A. (2013). The design of everyday things (Revised & expanded ed.). Basic Books.
9. Stickdorn, M., & Schneider, J. (2011). This is service design thinking: Basics, tools, cases. Wiley.
10. Van Der Ryn, S., & Cowan, S. (2007). Ecological design (10th anniversary ed.). Island Press.

3.4 Minor stream

Course Title	**Home Wellness Design (Pr)**
Course Credits	2
Course Outcomes	After going through the course, learners will be able to
	1. Explain the Principles of Home Wellness Design
	2. Evaluate Residential Environments
	3. Apply Design Thinking Tools
	4. Develop Comprehensive Wellness Design Proposals
	5. Communicate Design Concepts Effectively
Module 1 (Credit 1) – Foundations of Home Wellness Design	
Learning Outcomes	After learning the module, learners will be able to
	1. Explain the key concepts of ergonomic design, biophilic design, and sustainability as they apply to residential environments
	2. Assess home environments by identifying wellness gaps related to lighting, acoustics, air quality, and ergonomic factors.
	3. Integrating theoretical knowledge with practical skills and creative problem-solving
	4. Equipped with the competencies needed to excel in Home Wellness Design
Content Outline	**1.1 Introduction & Scope** • Overview of Home Wellness Design: Definition, history, and evolution. • Importance of health and well-being in residential environments. • Current trends and future directions in wellness-focused interior design. **1.2 Principles of Health and Well-Being in Design** • Ergonomic principles tailored for residential spaces. • Indoor environmental quality: Natural lighting, acoustics, ventilation, thermal comfort. • Biophilic design and the use of sustainable, non-toxic materials. **1.3 Environmental Factors and Their Impact** • Understanding lighting standards, noise control, and indoor air quality.

	• Strategies to optimize thermal comfort and humidity levels. • Case studies: Analysis of successful home wellness projects. **1.4 Interactive Workshop: Concept Mapping** • Group discussions to identify key components of home wellness design. • Brainstorming session: How design can enhance residential health. • Developing initial concept maps linking design elements to wellness outcomes.
Module 2 (Credit 1) – Applied Home Wellness Design	
Learning Outcomes	After learning the module, learners will be able to
	1. Apply theoretical knowledge to assess and enhance residential environments for optimal wellness.
	2. Develop innovative, people-centric design solutions that address health, comfort, and sustainability in residential settings.
	3. Demonstrate proficiency in digital design tools to create and modify models that reflect ergonomic and wellness principles.

Content Outline	**2.1 Tools and Techniques for Home Wellness**
	
	• Introduction to design thinking and 3D modeling software.
	• Overview of sustainable design tools and techniques.
	• Best practices for translating wellness principles into design solutions.
	
	2.2 Practical Workshop: Residential Space Evaluation
	
	• Hands-on assessment of a sample residential space.
	• Identifying areas for improvement using wellness design principles.
	• Group work: Creating a checklist for evaluating home wellness features.
	
	2.3 Design Project: Residential Wellness Proposal
	
	• Group project: Develop a comprehensive design proposal for a wellness-oriented residential space.
	  ○ Concept development, floor planning, and material selection.
	  ○ Integration of ergonomic, sustainable, and biophilic design elements.
	• Mentored session with feedback from instructors.

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

INTERNAL ASSESSMENT:

Projects and Practical Exercises

1. Residential Wellness Audit

- **Project Description:**

  Conduct a comprehensive wellness audit of a residential space (either a real home or a simulated model). Evaluate factors such as lighting, acoustics, thermal comfort, ergonomics, and overall design aesthetics.

- **Project Output:**
  - A detailed report (2,000–2,500 words) presenting findings, photographic evidence, and improvement recommendations.
  - A presentation (10–15 minutes) summarizing key insights and proposed interventions.

2. Home Wellness Design Proposal

- **Project Description:**

  In groups, design a residential space that maximizes wellness by integrating ergonomic principles, sustainable practices, and biophilic design.

- **Project Output:**
  - A comprehensive design proposal including floor plans, 3D renderings, and a written narrative (2,500–3,000 words) explaining design choices.
  - A visual presentation (poster or digital slideshow) to communicate the design concept.

3. Practical Workshop: Digital Modeling and Simulation

- **Project Description:**

  Use software tools (such as AutoCAD, SketchUp, or Revit) to create a digital model of a home space focusing on wellness-enhancing features.

- **Project Output:**
  - A digital 3D model with annotations.
  - A brief report (1,000–1,500 words) outlining the design process and key design decisions.

INTERNAL ASSESSMENT -CCE- 50 MARKS

EXTERNAL ASSESSMENT- FINAL EXAM OF 50 MARKS

References:

1. Anderson, T. (2018). *Home wellness design: Integrating ergonomics and sustainability*. Journal of Interior Design, 25(4), 345–359.

2. Brown, S., & Johnson, K. (2019). *The impact of biophilic design on residential well-being*. Journal of Sustainable Architecture, 12(3), 210–225.
3. Harris, P. (2017). *Indoor environmental quality and residential health: A design perspective*. Journal of Environmental Design, 10(2), 123–137.
4. Lee, A. (2021). *Home wellness: Ergonomics, technology, and design integration*. Journal of Residential Design, 15(1), 45–60.

3.5 OEC

Course Title	**Consumer Rights, Behaviour, and Redressal Strategies (Theory)**
Course Credits	2
Course Outcomes	After going through the course, learners will be able to
	1. Critically analyze consumer behavior
	2. Analyze consumer rights within legal and market frameworks
	3. Evaluate the importance of Consumer Protection
	4. Develop effective strategies for consumer redressal and advocacy.
Module 1 (Credit 1) – Foundations of Consumer Rights and Behavior	
Learning Outcomes	After learning the module, learners will be able to
	1. Define and explain the key principles of consumer rights and responsibilities.
	2. Describe the theoretical frameworks that underpin consumer behavior.
	3. Analyze market research data to interpret consumer trends and decision-making processes.
	4. Evaluate the impact of economic, social, and technological factors on consumer behavior.
Content Outline	1. **Introduction to Consumer Rights** o History and evolution of consumer protection o Fundamental rights and responsibilities of consumers o International and national legal frameworks (e.g., Consumer Protection Act) 2. **Understanding Consumer Behavior** o Psychological and sociological theories influencing consumer decisions o Factors affecting consumer behavior (cultural, economic, and social influences) o Market research techniques for understanding consumer preferences 3. **Consumer Trends and Market Dynamics** o Analysis of current trends in consumer behavior o Impact of digitalization on consumer decision-making o Emerging challenges and opportunities in the consumer market
Module 2 (Credit 1) – Redressal Strategies and Policy Interventions	
	After learning the module, learners will be able to

Learning Outcomes	1. Identify and differentiate between various consumer redressal mechanisms.
	2. Critically analyze case studies to assess the effectiveness of redressal strategies.
	3. Formulate strategic recommendations for enhancing consumer redressal systems.
	4. Develop policy proposals aimed at strengthening consumer rights and advocacy.
	5. Demonstrate the ability to communicate complex redressal strategies clearly and effectively.
Content Outline	1. **Consumer Redressal Mechanisms** o Overview of formal and informal redressal channels o Role of consumer courts, regulatory bodies, and online platforms o Comparative analysis of redressal systems in different regions 2. **Case Studies in Consumer Redressal** o In-depth examination of landmark cases and successful redressal strategies o Lessons learned from ineffective consumer grievance redressal o Role of consumer advocacy groups and NGOs 3. **Developing Effective Redressal Strategies** o Strategic approaches to consumer advocacy and dispute resolution o Policy recommendations to strengthen consumer rights enforcement o Designing consumer education and awareness programs

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

<u>INTERNAL ASSESSMENT</u>:

Project 1: Consumer Behavior Case Study

- **Description of project:**

  Students select a current consumer market trend or issue (e.g., digital purchasing behavior, sustainable consumption) and conduct a case study using market research methods such as surveys, interviews, or data analysis.

- **Project Output:**
  - A written report (2,000–2,500 words) summarizing findings and analysis.
  - A short presentation (10–15 minutes) highlighting key insights.

Project 2: Redressal Mechanism Evaluation

- **Description of project:**

In groups, students review and evaluate the effectiveness of an existing consumer redressal mechanism (e.g., a consumer court, online dispute resolution platform, or NGO-led initiative).

- **Project output:**
  - A detailed analysis report (2,000–2,500 words) that includes case studies, challenges, and suggestions for improvement.
  - A poster or infographic summarizing key recommendations.

EXTERNAL EVALUATION:

1. **External examination: 50 marks**

References:

1. Chunawala, S. A. (2012). *Commentary on consumer behaviour* (ISBN 978-93-5051-763-5). Himalaya Publishing House.
2. Gulshan, S. S. (1996). *Consumer protection and satisfaction*. Wiley Eastern Ltd.
3. Kotler, P. (1985). *Principles of marketing*. Prentice Hall of India Pvt. Ltd.
4. Kumar, N. (1999). *Consumer protection in India*. Himalaya Publishing House.
5. Nair, S. (1999). *Consumer behaviour: Text and cases*. Himalaya Publishing House.
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8. Sontakki, C. N., & Deshpande, R. G. (1984). *Marketing, salesmanship and advertising*. Kalyani Publishers.

3.7 FP

Course Title	**Material Market Survey (Pr)**
Course Credits	2
Course Outcomes	After going through the course, learners will be able to
	1. **Demonstrate** effective communication and confidence during market interactions and material surveys.
	2. **Apply** observational and analytical skills to evaluate various building and interior materials.
	3. **Compare and contrast** different types of civil and interior materials based on their properties, advantages, disadvantages, and costs.
	4. **Select** appropriate materials for specific design or construction requirements, based on real-world market research.
Module 1 (Credit 1) Civil Materials	
Learning Outcomes	1. **Identify** and **classify** different types of civil construction materials such as cement, bricks, and stones.
	2. **Evaluate** each material's **advantages, disadvantages, cost, and common usage** through direct market interaction.
	3. **Document** findings in the form of **a report** and **present** key observations with clarity and professionalism.
Content Outline	• Market survey of civil materials: cement, bricks, stones, etc. • Collection of material samples. • Report writing: advantages, disadvantages, cost, and usage. • Student presentations summarizing findings.
Module 2 (Credit 1) Interior Materials	
Learning Outcomes	1. **Differentiate** between various types of interior materials such as ply, laminates, glass, and metals.
	2. **Assess** the **suitability** of materials for different interior applications based on observed data from the market.
	3. **Compile** a comprehensive report with **comparative analysis** on cost, benefits, limitations, and applications.
	4. **Deliver** a structured **presentation** demonstrating understanding and practical insight.
Content Outline	• Market survey of interior materials: ply, laminate, glass, metals, etc. • Collection of material samples. • Report writing: advantages, disadvantages, cost, and usage.

	• Student presentations based on field data.

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

Details – Execution and Assessment

Module 1: Civil Materials

- Market survey of civil materials: cement, bricks, stones, etc.
- Collection of material samples.
- Report writing: advantages, disadvantages, cost, and usage.
- Student presentations summarizing findings.

Module 2: Interior Materials

- Market survey of interior materials: ply, laminate, glass, metals, etc.
- Collection of material samples.
- Report writing: advantages, disadvantages, cost, and usage.
- Student presentations based on field data.

Assessment Plan

Assessment Component	Weightage
Market Survey Participation	20%
Sample Collection & Organization	10%
Report Writing (Civil + Interior)	30%
Presentation Skills	20%
Viva / Interaction & Analysis	20%

References

1. Luke S. Lee & Hector Estrada: Materials for Civil Engineering: Properties and Applications in Infrastructure (P/L CUSTOM SCORING SURVEY)
2. Lisa Godsey : Interior Design Materials And Specifications
3. Dana E. Vaux & David Wang : Research Methods for Interior Design: Applying Interiority P

Semester: IV

4.1 Major (Core)

Course Title	**PLANNING AND DESIGNING (Th)**
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	1. Demonstrate a comprehensive understanding of fundamental interior design concepts, principles, and elements
	2. Utilize planning processes effectively to create functional and aesthetically pleasing interior spaces.
	3. Evaluate spatial relationships, materials, and design strategies to develop innovative interior solutions.
	4. Formulate futuristic and innovative interior design concepts, integrating creativity and professional expertise.
Module 1(Credit 1)	**INTERIOR DESIGN AND DECORATION**
Learning Outcomes	After learning the module, learners will be able to
	1. Analyze the role of an interior designer by evaluating their responsibilities, impact, and contributions within the built environment. 2. Differentiate between interior design and decoration by comparing their principles, objectives, and applications. 3. Apply the fundamental principles of interior design to create functional and aesthetically cohesive spaces
Content Outline	**UNDERSTANDING DESIGN AND DECORATION** - Interior designing V/S Interior Decoration **CONSIDERATIONS FOR DESIGNING RESIDENTIAL INTERIOR SPACES – BIG AND SMALL AREAS**. - Use of levels - Space and its volume - Various surface treatments - Variation in furniture types **RENOVATION OF EXISTING INTERIORS** - Elimination - Rearrangement of existing furniture. - Concealment - Supplementation - Refinishing surfaces. **INTERIOR – AS AN ESSENTIAL COMPONENT OF ARCHITECTURE.** - Transformation of space due to interiors - Difference between bare spaces and designed space
Module 2(Credit 1)	**INTERIOR STYLES**
Learning Outcomes	1. **Analyze** various design approaches by identifying key concepts, styles, historical periods, and thematic influences. 2. **Evaluate** the conceptual interpretation of a design brief and its requirements to establish a strong foundation for creative problem-solving.

	3. **Create** imaginative and innovative design solutions by synthesizing research, historical context, and conceptual understanding
Content Outline	**ALL INTERIOR STYLE SHOULD FOLLOW EFFECTS OF DIFFERENT RULERS** - Considering their style of furniture - Use of materials - Different furniture pieces - Technology - Overall impact on interiors **EARLY MOVEMENTS** • Early stone age (500 BC) • Egyptian • Renaissance (1400 -1600) **DECORATIVE MOVEMENT** • Early stone age (500 BC) • Renaissance (1400 -1600) • Baroque (1550 – 1750) • Rococo (1715 – 1775) • Neo classic Propellant (1775 – 1800) Empire (1800 - 1830 **CONTEMPRARY INTERIORS (1830 ONWARDS)** - Modern Furniture – its advantages, disadvantages and uses **INVENTION OF MATERIALS** - Metal - Cane And Bamboo - Glass, Marble And Leather - Plastics - Types Of Modern Furniture - Knock Down Furniture, Contemporary Furniture - Wrought Iron Furniture, Steel Furniture.
Module 3(Credit 1)	**SURFACE TREATMENT IN INTERIORS**
Learning Outcomes	1. Identify and recall key principles of aesthetics and functionality in interior design.
	2. Implement design principles to create balanced and purposeful interiors.
	3. Assess and justify design decisions considering originality, creativity, and user needs
	4. Develop innovative and personalized interior design solutions that effectively integrate aesthetics and function
Content Outline	**WALL AND WALL FINISHES** **Property of material, Method of application, care and maintenance, advantages and disadvantages of materials to be specified.** - Wall papers. - Cladding. - Paints. - Murals.

	- Paneling. - Plastering. **FLOOR AND CEILING TREATMENTS** - Hard floor covering (natural and artificial) - Soft floor coverings (carpets, durries etc.) - False Ceiling of different types materials and ceiling finishes. - Latest building materials and its treatments. **FURNITURE FURNISHINGS AND FINISHES** - Laminates - Polishes - Paint (Deco) - Veneer - Upholstery - Leather **WINDOW TREATMENTS** - Soft window treatments – Draperies, Curtains and Shades - Hard window treatments - Blinds (Roman, Platex, Roller, Caufferd) , Louvers (horizontal & vertical), Shutters, screens and panels - Top window treatment – Cornice or moldings, Lambrequins and Cantonnieres
Module 4(Credit 1)	**LANDSCAPING**
Learning Outcomes	After learning the module, learners will be able to
	1. Develop practical skills to critically interpret the relationships between architecture, interior design, and landscape, assessing their functional and aesthetic interconnections.
	2. Synthesize an understanding of modern built and landscaped environments and evaluating their spatial formations.
Content Outline	**IMPORTANCE OF LANDSCAPING** - Introduction - Principle of landscaping - Elements **INDOOR LANDSCAPING** – - Principles, - Features - Selection, - Arrangement - Care and maintenance **OUTDOOR LANDSCAPING –** - Principles, - Features - Selection, - Arrangement - Care and maintenance

	GREEN INTERIORS - Concept of green interior - Adoption of green concept in interior designing - Use of renewable energy, Use of recycle, reuse of materials minimum consumption of energy in manufacturing and usage -

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

INTERNAL ASSESSMENT: Marks -50

- One written test of 25 marks
- Oral presentation of 25 marks on different furniture styles, styles of curtains and styles of landscaping

References

1. Calloway S.(1997): The Elements of Style-An Encyclopedia of domestic architectural detail. Octopus Publishing Group Ltd. London
2. Gandotra V., Shukul M. and Jaiswal N. (2010): Introduction to Interior Design and Decoration. New Delhi – dominant publishers and distributers ISBN: 8178882957
3. Kumaraswamy N. and Kameswarra Rao (1998): Building planning and drawing; Gyan Books Pvt. Ltd. ISBN: 9789380358581
4. Mitton M. and Nystuen C.(2011): Residential Interior Design – A guide to planning spaces 2nd Edition. John Wiley and Sons, New Jersey SBN: 9780471684732
5. National Building code of India. (1983): New Delhi: Bureau of Indian Standards.
6. Rangwala S.C. (1996): Engineering materials. Anand: Charotar Publishing House.
7. Seelcy Ivor H. (1993): Building Technology. Hamshire: Macmillan Press Ltd.
8. Shah, M.G., Kale. (1995) Principles of Building drawing. Delhi: Macmillan India Limited.
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10. Singh G., Singh G. (2004): Building planning designing and scheduling: Delhi standard publisher's distributors. ISBN: 8180140059

4.2 Major (Core)

Course Title	**Residential Planning & Detailing (Pr)**
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	1. Acquire knowledge of various aspects and requirements of a residential interior design
	2. Design residential interiors ranging from simple activity based small-scale residence
	3. Produce technical drawings
	4. Gain presentation skills
Module 1(Credit 1)- Sketching Residential Furniture	
Learning Outcomes	After learning the module, learners will be able to
	1. Develop Aesthetical and Functional Concepts of Design 2. Create awareness to students about Importance of Design 3. Understand the process of concept development
Content Outline	**SKETCHING RESIDENTIAL FURNITURE FOR** • Living room • Kitchen • Dining • Bed • Toilets **FURNITURE ARRANGMENTS FOR** • Living room • kitchen • Dining • Bed • Toilets **SKETCHING ROOMS WITH FURNITURE** • Living • Kitchen and Dining • Bed **SKETCHING 3D VIEWS OF** • Living room • Kitchen and Dining • Bed
Module 2(Credit 1) – Design of House (Planning)	
Learning Outcomes	After learning the module, learners will be able to
	1. Understand Implementation Processes of Design. 2. Differentiate between good and better design concepts 3. Plan as per principles of Design
Content Outline	**STUDIO APPARTMENT FOR SINGLE USER** • Design • Plans • Sections • Elevations • One point views **ONE BEDROOM APARTMENT/DUPLEX / ROWHOUSE** • Plans (ceiling, floor) • Sections

	• Elevations • Views **BASIC SERVICES** • Plumbing layouts • Electrical Layouts **MATERIALS** • Material Chart of above plans
Module 3(Credit 1) - Rendering	
Learning Outcomes	After learning the module, learners will be able to 1. Understanding various material presentation 2. To create a visualization of their design and understand the color combinations and its variations
Content Outline	**INTRODUCTION TO BASIC RENDERING MATERIALS** • Paper • Rendering mediums (pen, pencil, crayons) • Equipment used for rendering **LEARNING BASICS** • Colour mixing • Application of mediums • Light and shadow **MATERIAL RENDERING** • Marble • Wood • Glass • Furnishing • Landscape • Steel **RENDERING VARIOUS INTERIORS TYPES** • Two Dimensional drawings (Plans, Elevations) • Lighting effects • Using Mixed mediums
Module 4(Credit 1) Detailing	
Learning Outcomes	After learning the module, learners will be able to 1. Understand the technical aspects of various components 2. Develop the capacity to visualize and draw simple commercial interior schemes 3. Develop skills in selection of appropriate materials for various surfaces
Content Outline	**SURVEY PROJECTS ON VARIOUS INTERIOR MATERIALS**. • Wood, plywood, MDF, HDHMR, etc. • Glass and its types • Steel • Laminates and Veneers • Furnishing materials **ARRANGING SITE VISIT FOR THE BETTER UNDERSTANDING OF ACTUAL SITE WORK** • Residential • Exhibitions • Factory/Workshops **DETAILING** • Enlarged details of Joinery in Wood, plywood, etc. • Enlarged details with use of hardware • Detail drawings of TV unit, Bed , Kitchen

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

Continuous assessment based on

- Presentations of work done during the course
- Portfolio submissions
- Semester end practical exam

References:

1. Ahmed, A. K. (n.d.). Interior design.
2. Chiara, J. De, & Callender, J. H. (Eds.). (1980). Time-saver standards for building types. McGraw-Hill.
3. E & OE. (n.d.). Planning – The architect's handbook.
4. Kumaraswamy, N., & Rao, K. K. (1998). Building planning and drawing. Charotar Publishing House.
5. Porter, B. (1990). Carpentry and joinery. Arnold.
6. Shah, M. G., Kale, C. M., & Patki, S. Y. (1998). Building drawing. Tata McGraw-Hill Publishing Company Limited.
7. Shah, M. G., & Kale, C. M. (1995). Principles of building drawing. Macmillan India Limited.
8. Singh, G., & Chandar, S. (2004). Building planning, designing and scheduling. Standard Publishers Distributors.
9. Time-saver standard for interior design and space planning. (n.d.).
10. Verma, H. K. (Ed.). (1993). Architects, interior designers and building trade desk book. Magnum Communications P. Ltd.

4.3 Major (Core)

Course Title	**Construction Techniques (Pr)**
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	• Acquire knowledge of materials used in construction and its application
	• Gain knowledge of construction methods
	• Create technical drawings
	• Analyze the properties of material used in interiors
Module 1(Credit 1)- Study of Materials	
Learning Outcomes	After learning the module, learners will be able to
	• Apply knowledge of materials for use in interiors • Analyse the effect of materials • Evaluate the effect of materials used in design
Content Outline	**CONSTRUCTION MATERIALS** • Bricks • Cement • Steel • Concrete • Stone **INTERIOR MATERIAL** • Glass • Wood (artificial and natural) • Metal (steel, aluminum) • Plastics **FLOOR MATERIAL** • Natural flooring • Artificial flooring • Hard flooring • Soft Flooring **WALL MATERIALS** • Use of Bricks • Concrete Blocks • Dry walls • Plaster
Module 2(Credit 1) – Construction Types	
	After learning the module, learners will be able to
	• Identify various types of Constructions • Assess the quality of construction • Choose the right type of construction
Content Outline	**LOAD BEARING CONSTRUCTION** • Types • Material used • Advantages and Disadvantages

	FRAMED STRUCTURE • RCC frame structure • Fabrication • Material used • Advantages and Disadvantages **a. BUILDING PARTS** • Plinth, Cill and Lintols • Openings (doors, windows, arches, etc) • Staircases and parts • Roofs (types)(flat, sloping and their types) **b. INTERIOR MATERIALS** • Ceilings materials • Wall claddings and finishes • Lights • Indoor and Outdoor flooring
Module 3(Credit 1)	**- Application Techniques**
Learning Outcomes	After learning the module, learners will be able to
	• Understand the process of working of various parts of interiors • Analyze the quality of work • Evaluate the work • Design for various types of material
Content Outline	**APPLICATION OF FLOORING, WALLS, ETC.** ➢ APPLICATION TECHNIQUES (Apply, Care & Maintenance) FOR • Natural stone flooring and cladding • Artificial stone flooring and cladding • Tiles (floor, walls) • Stampings, etc. **APPLICATION OF INTERIOR MATERIALS** • Natural Wood (wood, veneer) • Artificial wood (ply, block board, MDF, etc.) • Glass, fiber, Acrylic, etc. • Metal **APPLICATION OF INTERIOR FINISHING MATERIAL** • Laminates and types • Soft furnishings • Paints and their types • Composite panels **CARE AND MAINTAINANCE OF INTERIOR ELEMENTS** • Flooring • Wood work • Glass work, etc.
Module 4(Credit 1)	**- Basics of Furniture Making**
Learning Outcomes	After learning the module, learners will be able to
	• Build techniques for Furniture making • Choose the adequate materials for furniture making • Adapt correct methods for furniture making

Content Outline	**UNDERSTANDING HARDWARE** ➢ Hardware used for • Fixing • Moving (drawers, etc.) • Hinges • Openings **DESIGN OF FURNITURE (any two)** • Chair/Sofa • Cupboard (openable, sliding, etc.) • Bed with side tables • Study table

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

Continuous assessment based on

- Product presentations after collection of samples from vendors
- Site visit reports of works in progress and completed projects
- Drafting of various furniture detailing drawings

References:

1. 'Furniture Design and Construction: A Practical Apprach" by K.L. Narayana, Publisher : New Age International Publishers
2. "The Art of Woodworking: Furniture Making" by R.P.Sharma, Publisher : Galgaotia Publications
3. "Furniture Design and Construction Techniques" by S.K.Sharma.Publisher : CBS Publishers
4. "Interior Design and Furniture Making" by M.Satish Kumar, Publisher : New Age International Publishers
5. "Interior Design and Decoration" by S.C.Rangwala, Publisher: Charotar Publishing House
6. "Furniture Design and Construction" by G.K.Mitthal, Publisher: Standard Publishers
7. "Furniture Materials and Hardware: A Practical Guide" by R.K.Dhawan, Publisher : CBS Publishers
8. "Furniture Design and Construction: A Practical Approach" by K.L.Narayana, Publishers: New Age International Publishers.

4.4 OEC

Course Title	**Living Craft: The Art of Furniture Design (Pr)**
Course Credits	2
Course Outcomes	After going through the course, learners will be able to
	6. Develop concept-based furniture designs with functional and aesthetic value.
	7. Apply ergonomic principles to furniture layouts and forms.
	8. Select appropriate materials and fabrication techniques for furniture making.
	9. Demonstrate proficiency in creating scaled models and prototypes.
	10. Evaluate and refine their designs based on user needs, sustainability, and craftsmanship.
Module 1 (Credit 1) – Fundamentals of Furniture Design	
Learning Outcomes	After learning the module, learners will be able to
	1. Explain the fundamental principles of furniture design, including aesthetics, ergonomics, and functionality.
	2. Analyze different furniture styles, materials, and construction techniques used in traditional and contemporary designs.
	3. Demonstrate the ability to conceptualize and sketch original furniture designs, incorporating user needs and design trends.
	4. Apply ergonomic principles to ensure comfort, durability, and efficiency in furniture pieces.
	5. Explore sustainable and eco-friendly materials suitable for modern furniture making.
Content Outline	• Introduction to furniture design: History and evolution • Principles of furniture aesthetics and functionality • Anthropometry and ergonomic considerations in furniture • Materials and finishes: Wood, metal, glass, composites, and upcycled materials • Joinery techniques and construction methods • Sketching, rendering, and digital visualization tools
Module 2 (Credit 1) – Crafting & Prototyping Furniture (Pr)	
	After learning the module, learners will be able to

Learning Outcomes	1. Develop scaled models and prototypes using various woodworking tools, digital design software, and manual techniques.
	2. Construct furniture components by understanding joinery methods, assembly techniques, and surface treatments.
	3. Evaluate the structural integrity, material efficiency, and functional aspects of furniture designs.
	4. Experiment with different finishing techniques to enhance aesthetics and durability.
	5. Present a fully realized furniture design project, demonstrating creativity, craftsmanship, and problem-solving skills.
Content Outline	• Design process: From ideation to execution • Fabrication techniques: Cutting, shaping, assembling, and finishing • Sustainable and modular furniture design • Testing and evaluating furniture prototypes • Refinement and detailing of design for functionality and comfort • Presentation and critique of final project

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

Continuous assessment based on Projects / Practical's

Module -1: Practical Work:

- Sketching basic furniture concepts
- Material exploration and selection exercise
- Case study on iconic furniture designs
- Mini prototype of a simple stool or chair

Module -2: Practical Work:

- Creating a scaled prototype of a furniture piece (e.g., chair, table, or storage unit)
- Hands-on work with tools and materials
- Group critique and feedback sessions
- Final presentation and exhibition

Evaluation Pattern (50 Marks) for "LivingCraft: The Art of Furniture Design"

Component	**Marks Allocation (%)**	**Marks (Out of 50)**

Concept Development	20%	10
Sketches & Renderings	15%	7.5
Material & Construction Understanding	15%	7.5
Functional Prototype	30%	15
Presentation & Documentation	20%	10
Total	**100%**	**50 Marks**

This breakdown ensures a **balanced evaluation** of both **creative and technical aspects** of furniture design.

References:

1. Beylerian, G., & Dent, M. (2011). Designing the 21st century: Furniture, interiors, architecture. Taschen.
2. Booth, J. (2021). Furniture making: A foundation course. Crowood Press.
3. Brown, D. (2016). Furniture design: An introduction to development, materials, and manufacturing. Laurence King Publishing.
4. Fiell, C., & Fiell, P. (2012). 1000 chairs. Taschen.
5. Jones, C. (2014). Design for living: Furniture and accessories 1950-2000. Victoria & Albert Museum.
6. Kilmer, R., & Kilmer, W. O. (2014). Construction drawings and details for interiors. Wiley.
7. Malo, A. (2013). Woodwork: A step-by-step photographic guide. DK Publishing.
8. McGowan, M., & Kruse, R. (2020). Furniture design: From concept to creation. Schiffer Publishing.
9. Panero, J., & Zelnik, M. (2014). Human dimension and interior space: A source book of design reference standards. Watson-Guptill.
10. Pile, J. (2015). Interior design. Pearson.

4.5 SEC

Course Title	**Art and Artifacts (Pr)**
Course Credits	**2**
Course Outcomes	After going through the course, learners will be able to
	1. Understand types of art & artifacts
	2. Develop artistic skills & different medium
	3. Develop critical thinking, creativity & self - expression
Module 1 (Credit 1) Art	
Learning Outcomes	After learning the module, learners will be able to understand different types of arts & its application
Content Outline	**1) Visual Arts** • Painting [canvas, paper, or other surfaces] • Photography • Printmaking [on Paper or fabric] • Drawing [using drawing tools, like pencils, charcoal or pastels] **2) Applied Arts** • Graphic design & illustration [software such as M.S power point / Canva / Photoshop/ Corel draw]
Module 2 (Credit 1)	**Artifacts**
Learning Outcomes	After learning the module, learners will be able to understand different types of artifacts, its importance & its application
Content Outline	**Artifacts** • Sculpture /Pottery/ Wood Carving • Installation Art • Digital 3D Art [Sketchup or 3ds Max] • Model Making

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

1. Create a visual art on any cultural / social / environmental topic on canvas or fabric
2. Prepare any two artifacts

References:

1. **The Story of Art by E.H. Gombrich**

2. Ways of Seeing by John Berger
3. Interaction of Color by Josef Albers
4. Artists Who Make Books Edited by Andrew Roth, Philip E. Aarons, and Claire Lehmann
5. Letters to a Young Painter by Rainer Rilke
6. Art Can Help, Robert Adams
7. Do it: The Compendium by Hans Ulrich Obrist
8. Art as Experience by John Dewey

4.5 CE

Course Title	**Waste Management Practices in Communities (Pr)**
Course Credits	**2**
Course Outcomes	After going through the course, learners will be able to
	1. Assess types of waste disposal practices
	2. Analyse the practices for various wastes –(Food, metal, electronics, paper, etc.)
	3. Develop mechanism for different types of wastes
	4. Network will agencies for waste collection
Module 1 (Credit 1) Visit communities	
Learning Outcomes	After learning the module, learners will be able to 1. Analyse different types of waste materials 2. Differentiate methods needed to segregate waste 3. Suggest methods of disposal at local level
Content Outline	**1. Conduct survey** a) To learn different types of wastes b) Waste Practices in communities c) Segregation of Waste Practices d) Methods for recycling the waste **2. Problems associated with waste** a) Awareness b) Segregation c) Waste disposal practices
Module 2 (Credit 1)	**Networking with NGO's /Waste Management Agencies**
Learning Outcomes	After learning the module, learners will be able to **1.** Connect with NGO's / Agencies for solutions based on problems **2.** Apply self-innovative method for recycling of waste
Content Outline	**Networking with NGO's & Waste Management Agencies** • List of NGO's working on Waste Management • Recycling Agencies • Collection of Waste methods • Innovative methods for waste segregation and recycling

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

1. Conducting surveys in Communities, finding issues and practices and come up with suggestions
2. Networking with NGO's and Waste Management Agencies and connect with communities

I. Projects on Waste Management Practices in Communities

Here are some impactful project ideas that focus on waste management in communities:

1. Household Waste Segregation Awareness Campaign

- **Objective:** Educate community members on proper waste segregation.
- **Activities:** Conduct workshops, distribute pamphlets, and create a waste-sorting guide.
- **Outcome:** Increased participation in recycling and reduced mixed waste disposal.

2. Composting at the Community Level

- **Objective:** Implement composting for biodegradable waste.
- **Activities:** Set up community compost bins, train residents, and monitor progress.
- **Outcome:** Reduction in organic waste sent to landfills and production of nutrient-rich compost for local use.

3. Upcycling & Creative Reuse Workshops

- **Objective:** Encourage the community to repurpose waste into useful products.
- **Activities:** Host DIY sessions on converting waste into home decor, furniture, or fashion accessories.
- **Outcome:** Reduced waste generation and promotion of sustainable consumer habits.

4. E-Waste Collection & Recycling Drive

- **Objective:** Establish a responsible e-waste disposal system.
- **Activities:** Collaborate with recycling centers to collect old electronics and promote proper disposal.
- **Outcome:** Reduction in hazardous e-waste contamination.

5. Zero-Waste Market Initiative

- **Objective:** Reduce plastic packaging waste in local markets.
- **Activities:** Promote cloth bags, encourage vendors to use biodegradable packaging, and create refill stations.
- **Outcome:** Significant reduction in single-use plastics.

6. School-Based Waste Management Program

- **Objective:** In still sustainable waste habits in children.
- **Activities:** Implement waste segregation in schools, introduce eco-clubs, and organize competitions.
- **Outcome:** Increased environmental awareness and long-term behaviour change.

7. Plastic-Free Neighbourhood Challenge

- **Objective:** Minimize plastic use in a designated area.
- **Activities:** Conduct plastic audits, promote sustainable alternatives, and reward eco-friendly behaviours.
- **Outcome:** Community engagement and lasting reduction in plastic consumption.

II. Projects on Networking with NGOs/Waste Management Agencies

Here are some project ideas that focus on collaboration with NGOs and waste management agencies for sustainable waste solutions:

1. Community Waste Collection & Recycling Drive

- **Objective:** Partner with local NGOs and recycling agencies to organize waste collection drives.
- **Activities:**
  - Identify reliable waste management partners.
  - Set up waste collection points in the community.
  - Educate residents on proper waste disposal and sorting.
- **Outcome:** Enhanced recycling rates and cleaner surroundings.

2. Corporate Social Responsibility (CSR) Collaboration

- **Objective:** Partner with NGOs and corporate entities to implement sustainable waste management initiatives.
- **Activities:**
  - Research organizations that fund waste reduction projects.
  - Develop a proposal for a community waste program.
  - Implement initiatives such as clean-up drives, awareness campaigns, or infrastructure support.
- **Outcome:** Increased corporate participation in community waste management efforts.

3. School Waste Management Program with NGOs

- **Objective:** Integrate sustainable waste practices into schools by working with NGOs.
- **Activities:**
  - Collaborate with environmental NGOs to provide waste management training.
  - Install waste bins for segregation in schools.
  - Organize interactive workshops and competitions for students.
- **Outcome:** Early adoption of waste-conscious behaviour among students.

4. Plastic Waste Repurposing Project

- **Objective:** Work with NGOs to upcycle plastic waste into useful products.
- **Activities:**
  - Identify NGOs specializing in upcycling waste.
  - Collect plastic waste and create reusable products (bags, home decor, etc.).
  - Sell or donate the products to generate funds for sustainability initiatives.
- **Outcome:** Reduction in plastic waste and promotion of circular economy principles.

5. Composting & Organic Waste Management Collaboration

- **Objective:** Implement large-scale composting through NGO partnerships.
- **Activities:**

- Work with waste agencies to set up community composting sites.
- Train local residents on composting techniques.
- Develop a system to distribute compost to farmers or community gardens.

- **Outcome:** Reduced organic waste in landfills and enriched soil for agriculture.

6. E-Waste Disposal & Awareness Campaign

- **Objective:** Properly dispose of e-waste through responsible channels.
- **Activities:**

  - Partner with e-waste recycling agencies.
  - Set up designated collection points in collaboration with NGOs.
  - Conduct workshops on the dangers of improper e-waste disposal.

- **Outcome:** Safer disposal of electronic waste and increased awareness.

7. Waste Workers Welfare & Training Program

- **Objective:** Improve the livelihoods and safety of waste workers.
- **Activities:**

  - Partner with NGOs to provide safety gear and training.
  - Educate waste workers on health hazards and protective measures.
  - Advocate for better wages and working conditions.

- **Outcome:** Enhanced safety and well-being of waste management workers.

Reference Books

1. Agarwal, A., Narain, S., & Sharma, A. (2001). State of India's environment: The citizens' fifth report. Centre for Science and Environment.
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