**ANNAMALAI UNIVERSITY**

**219 - B.Sc. – INTERIOR DESIGN & DECOR**

Programme Structure and Scheme of Examination (under CBCS)

(Applicable to the candidates admitted in Affiliated Colleges   
in the academic year 2022 -2023 ONLY)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Course Code** | **Part** | **Study Components & Course Title** | **Hours/**  **Week** | **Credit** | **Maximum Marks** | | |
| **CIA** | **ESE** | **Total** |
|  |  | **SEMESTER – I** |  |  |  |  |  |
| **22UTAML11** | I | **Language Course - I : Tamil - I** | 5 | 3 | 25 | 75 | 100 |
| **22UENGL12** | II | **English Course - I : Communicative English I** | 5 | 3 | 25 | 75 | 100 |
| 22UIDDC13 | III | Core Course - I : History of Design | 4 | 4 | 25 | 75 | 100 |
| 22UIDDC14 | Core Course - II : Fundamentals of design | 4 | 4 | 25 | 75 | 100 |
|  | Core Practical – I : Fundamentals of Design Practical’s 1 | 3 | - | - | - | - |
| 22UIDDA01 | Allied - I : Paper – 1 : Residential Space Planning 1 | 4 | 4 | 25 | 75 | 100 |
|  | Allied Practical – I : Residential Space Planning Practical’s 1 | 3 | - | - | - | - |
| **22UENVS18** | IV | **Environmental Studies** | 2 | 2 | 25 | 75 | 100 |
|  | **Total** | | **30** | **20** |  |  | **600** |
|  |  | **SEMESTER – II** |  |  |  |  |  |
| **22UTAML21** | I | **Language Course - II : Tamil - II** | 5 | 3 | 25 | 75 | 100 |
| **22UENGL22** | II | **English Course - II : Communicative English II** | 5 | 3 | 25 | 75 | 100 |
| 22UIDDC23 | III | Core Course – III : Colour and Accessories | 3 | 4 | 25 | 75 | 100 |
| 22UIDDP24 | Core Practical – I : Fundamentals of Design Practical’s 2 | 3 | 4 | 40 | 60 | 100 |
| 22UIDDA02 | Allied – II : Paper -2 : Residential Space Planning 2 | 3 | 3 | 25 | 75 | 100 |
| 22UIDDP02 | Allied Practical – I : Residential Space Planning Practical’s 2 | 3 | 3 | 40 | 60 | 100 |
| 22UIDDE26 |  | Internal Elective – I : Building Materials | 3 | 3 | 25 | 75 | 100 |
| 22UVALE27 | IV | **Value Education** | 2 | 1 | 25 | 75 | 100 |
| 22USOFS28 | **Soft Skill** | 2 | 1 | 25 | 75 | 100 |
| 22UNMSD01 |  | **Effective English** | 2 | 2 | 25 | 75 | 100 |
|  | **Total** | | **30** | **27** |  |  | **1000** |

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| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **SEMESTER – III** |  |  |  |  |  |
| **22UTAML31** | I | **Language Course – III : Tamil – III** | 5 | 3 | 25 | 75 | 100 |
| 22UENGL32 | II | English Course – III English Through Literature-I | 5 | 3 | 25 | 75 | 100 |
| 22UIDDC33 | III | Core Course – IV : Applied Art on Textiles | 4 | 4 | 25 | 75 | 100 |
| 22UIDDP34 | Core Practical – II : Applied Art on Textiles Practical - 1 | 3 | - | - | - | - |
| 22UIDDA03 | Allied - II : Paper -1 : Furniture design | 4 | 4 | 25 | 75 | 100 |
|  | Allied Practical – II : Furniture Design Practical 1 | 2 | - | - | - | - |
| 22UIDDE36 | Internal Elective – II : Building Finishes | 3 | 3 | 25 | 75 | 100 |
| 22UIDDN37 | IV | Non-Major Elective – I : Basics of soft furnishings | 2 | 2 | 25 | 75 | 100 |
| 22UIDDS38 | Skill Based Subject – I : Free Hand Sketching | 2 | 2 | 25 | 75 | 100 |
|  |  | **Total** | **30** | **21** |  |  | **700** |
|  |  | **SEMESTER – IV** |  |  |  |  |  |
| **22UTAML41** | I | **Language Course - IV: Tamil – IV** | 5 | 3 | 25 | 75 | 100 |
| 22UENGL42 | II | English Course – IV English Through Literature-II | 5 | 3 | 25 | 75 | 100 |
| 22UIDDC43 | III | Core Course – V : Surface Enrichment of Textiles | 4 | 4 | 25 | 75 | 100 |
| 22UIDDP44 | Core Practical – II: Applied Art on Textiles Practical - 2 | 4 | 4 | 40 | 60 | 100 |
| 22UIDDA04 | Allied – II : Paper – 2 Furniture Finishes | 3 | 3 | 25 | 75 | 100 |
| 22UIDDP04 | Allied Practical – II : Furniture Design Practical 2 | 3 | 3 | 40 | 60 | 100 |
| 22UIDDN47 | IV | Non-Major Elective – II : Basics of Interior Decoration | 2 | 2 | 25 | 75 | 100 |
| 22UIDDS48 | Skill Based Subject – II: Soft Furnishings in Interiors | 2 | 2 | 25 | 75 | 100 |
| 22UNMSD02 |  | **MS-Office Essentials** | 2 | 2 | 25 | 75 | 100 |
|  |  |  | **30** | **26** |  |  | **900** |
|  |  | **SEMESTER – V** |  |  |  |  |  |
| 22UIDDC51 | III | Core Course – VI : Floriculture and Landscape designing | 4 | 4 | 25 | 75 | 100 |
| 22UIDDC52 | Core Course – VII : Traditional Art in India | 4 | 3 | 25 | 75 | 100 |
| 22UIDDC53 | Core Course – VIII : Ergonomics | 4 | 4 | 25 | 75 | 100 |
| 22UIDDC54 | Core Course – IX : Resource Management | 4 | 4 | 25 | 75 | 100 |
| 22UIDDP55 | Core Practical – III : Draftsmanship - 1 | 3 | - | - | - | - |
| 22UIDDP56 | Core Practical – IV : CAD Practical - 1 | 3 | - | - | - | - |
| 22UIDDE58 | Internal Elective – III : Building Services | 4 | 3 | 25 | 75 | 100 |
| 22UIDDS59 | IV | Skill Based Subject – III : Sketchup | 2 | 2 | 25 | 75 | 100 |
| **22UGENS57** | **Gender Studies** | 2 | 1 | 25 | 75 | 100 |
|  |  | **Total** | **30** | **21** |  |  | **700** |
|  |  | **SEMESTER – VI** |  |  |  |  |  |
| 22UIDDC61 | III | Core Course – X : Graphic Design | 5 | 4 | 25 | 75 | 100 |
| 22UIDDC62 | Core Course – XI : Visual Merchandizing | 5 | 3 | 25 | 75 | 100 |
| 22UIDDC63 | Core Course – XII : Kitchen Design | 5 | 4 | 25 | 75 | 100 |
| 22UIDDP64 | Core Practical – III Draftsmanship - 2 | 5 | 4 | 40 | 60 | 100 |
| 22UIDDP65 | Core Practical – IV: CAD Practical - 2 | 4 | 4 | 40 | 60 | 100 |
| 22UIDDE66 | Internal Elective – IV : Estimation Costing and Specification | 4 | 3 | 25 | 75 | 100 |
| 22UIDDS68 | IV | Skill Based Subject – IV : Professional Practice | 2 | 2 | 25 | 75 | 100 |
| **22UEXTA67** | V | **Extension Activities** | - | 1 | 100 | - | 100 |
|  |  | **Total** | **30** | **25** |  |  | **800** |
|  |  | **Grand Total** | **180** | **140** |  |  | **4600** |

**Internal Elective Courses**

|  |  |  |
| --- | --- | --- |
| 22UIDDE26 | Internal Elective - I | Building Materials |
| 22UIDDE36 | Internal Elective – II | Building Finishes |
| 22UIDDE58 | Internal Elective – III | Building Services |
| 22UIDDE66 | Internal Elective – IV | Estimation Costing and Specification |

**Allied Courses**

|  |  |  |
| --- | --- | --- |
| 22UIDDA01 | Theory | Residential Space Planning 1 |
| 22UIDDA02 | Theory | Residential Space Planning 2 |
| 22UIDDP02 | Practical | Residential Space Planning Practical |
| 22UIDDA03 | Theory | Furniture design |
| 22UIDDA04 | Theory | Furniture Finishes |
| 22UIDDP04 | Practical | Furniture Design Practical |

**Non-Major Elective Courses (NME)**

(Department of Interior Design and Decor offers the following NME to other Departments)

|  |  |
| --- | --- |
| 22UIDDN37 | Non-Major Elective – I: Basics of soft furnishings |
| 22UIDDN47 | Non-Major Elective – II: Basics of Interior Decoration |

**Credit Distribution**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Part** | **Study Components** | **Papers** | **Credits** | **Total Credits** | **Marks** | **Total Marks** |
| Part I | Languages | 4 | 3 | 12 | 100 | 400 |
| Part II | Communicative English & English | 4 | 3 | 12 | 100 | 400 |
| Part III | Core Courses | 12 | 4 | 48 | 100 | 1200 |
|  | Core Practical | 4 | 4 | 16 | 100 | 400 |
|  | Allied Courses | 4 | 4 | 16 | 100 | 400 |
|  | Allied Practical | 2 | 4 | 8 | 100 | 200 |
|  | Internal Electives | 4 | 3 | 12 | 100 | 400 |
| Part IV | Environmental Studies | 1 | 2 | 2 | 100 | 100 |
|  | Value Education | 1 | 1 | 1 | 100 | 100 |
|  | Soft Skill | 1 | 1 | 1 | 100 | 100 |
|  | Gender Studies | 1 | 1 | 1 | 100 | 100 |
|  | Non-Major Electives | 2 | 2 | 4 | 100 | 200 |
|  | Skill Based Courses | 4 | 2 | 8 | 100 | 400 |
| Part V | Extension Activities | 1 | 1 | 1 | 100 | 100 |
|  |  | **45** |  | **140** |  | **4500** |

**Programme Outcomes**

1. Apply the fundamental knowledge on Interior Design.
2. Learn skill in designing safe and secured aesthetic environment.
3. Analyse new technologies, modern tools and software for Interior Design.
4. Function individually and in team work.
5. Understand their responsibilities in social and environmental context.
6. Exhibit professional ethics and norms in scientific development.
7. Effective communication in both verbal and written forms.
8. Apply theoretical knowledge to practical situation
9. Blend relevant instructions with real time applications in career.
10. Practice the use of lifelong learning.

**Programme Specific Outcomes**

1. Apply life skill oriented learning and display domain specific role clarity.
2. Exhibit the effective use of learned potential and shine as competent graduates.
3. Develop a competitive edge in career options and be a responsible designer.
4. Extend good technological connectivity for professional development.
5. Provide knowledge about material properties and its application for developing technology to ease the problems related to the society.

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| **SEMESTER: I**  **PART: III** | **COURSE CODE:** 22UIDDC13  Core Course - I: History of Design | **CREDIT: 4**  **HOURS: 4/W** |

**Course Objectives**

**Enable the students to**

1. Understand the history of art and architecture
2. Analyze the plan and structure of architecture through history
3. Create styles and design based on the materials and design used in different periods.

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| --- | --- | --- |
| **Unit No.** | **Content** | **No. of hrs.** |
| **I** | **Prehistoric & Egyptian interiors -** plan, materials, finishing materials, furniture ornamentation & accessories used for shelters in stone age & Egypt. | **10** |
| **II** | **European Interiors**- categorization of rooms, furniture, materials used for buildings in Greece, Rome, Medieval, Early & Late Renaissance, Baroque and Rococo architecture. | **25** |
| **III** | **Oriental and Colonial interiors** - types of materials used, parts of the building, furniture and other interior aspects of buildings in Japanese, Chinese and Indian colonial architecture | **20** |
| **IV** | **Indian interiors** - historical perspectives, Architectural styles and Contemporary trend in furniture, space allocation, local material usage and furniture used in Rajasthan, Gujarat, Chettinad-Karaikudi, Kerala and Pondicherry architecture. | **20** |
| **V** | **Modern & Post-Modern interiors-** The style statements of Modern periods - Art Nouveau, Art Deco, Eclecticism, High tech, Minimalism, Deconstructivism, Contemporary art styles. | **15** |

**Course Outcomes**

1. Understanding the architectural features of Prehistoric & Egyptian period.
2. Analyzing the different European styles of Architecture.
3. Interpret the colonial and oriental influence in interiors.
4. Compose modern architecture based on the Indian historical features.
5. Illustrate the modern and postmodern styles of interiors

**Textbooks**

1. Hinchman, Mark. History of Furniture (2009) A Global View: New York: Fairchild Books, Inc., (ISBN: 978-1-56367-544-7)
2. WimPauwels (2012), Contemporary Architecture & Interiors.
3. A history of interior design – 4th edn – 2013 – John Wiley &sons.Inc
4. Jeannie Ireland (2009), History of Interior Design, air child publications, illustrated ed.,
5. Jim Postell, Furnitute Design , Wiley publishers, 2007.
6. Robbie.G. Blakemore, (2005), History of Interior Design and Furniture. From Ancient Egypt to Nineteenth – Century Europe, Wiley Publishers

**Supplementary readings**

* [www.thoughtco.com/architecture-timeline-historic-periods-styles-175996](http://www.thoughtco.com/architecture-timeline-historic-periods-styles-175996)
* <https://www.britannica.com/art/Egyptian-architecture>
* <https://www.e-architect.com/european-architecture>
* <http://www.thebangala.com/architecture>
* <https://www.houzz.in/magazine/what-is-kerala-architecture-stsetivw-vs~116858736>

Mapping with Programme Outcomes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | H | M | - | M |
| CO2 | H | H | M | - | L |
| CO3 | H | H | M | - | M |
| CO4 | H | H | M | - | L |
| CO5 | H | M | H | - | L |

PO – Programme Outcome, CO – Course outcome

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| --- | --- | --- |
| **SEMESTER: I**  **PART:III** | **COURSE CODE:** 22UIDDC14  Core Course - II : Fundamentals of Design | **CREDIT: 4**  **HOURS: 4/W** |

**Course Objectives**

**Enable the students to**

1. Classify design types like structural and decorative design.
2. Examine the different elements of design in creating design objects.
3. Apply the Art principles in Interior Design.
4. Apply color harmonies in various rooms.
5. Apply the decorative styles and wall decoration techniques in various rooms.

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| --- | --- | --- |
| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Introduction to art and design, Development of interior design concept, importance of design, objectives of aesthetic planning. significance of art in design development, varieties of art, abstract and surreal, fundamentals of drawing and its practice, introduction to drawing equipment. | **10** |
| **Unit II** | Application of good taste and Types of design- Structural and Decorative design, Requirements of structural and decorative design. Classification of decorative design- Naturalistic, Stylized, Abstract and Geometrical Design. | **15** |
| **Unit III** | Elements of design **-** Line and direction, Form and Shape, Size, Color, Light, Pattern, Texture and Space. Application of elements of design in interior and exterior. | **10** |
| **Unit IV** | Principles of design: meaning and the basic five design principles. Balance, Rhythm, Harmony, Proportion and Emphasis – meaning, types (classification) and methods of achieving; their role in interior designing. Evaluation of design-criteria for evaluation. | **15** |
| **Unit V** | Motif - meaning. Development of design from motifs and application of motifs in interior decoration. Man, as a consumer of design. Qualities and role of a good interior designer. Career options for interior designers. | **10** |

**Course Outcomes**

1. Summarize the fundamentals of drawing, use and handling of drawing equipments.
2. Apply the Art and design concept in aesthetic planning.
3. Classify design types like structural and decorative design.
4. Examine the different elements of design in creating design objects.
5. Apply the Art principles in Interior Design.

**Text Books**

1. [Andal A. Parimalam P.](https://www.abebooks.com/servlet/SearchResults?an=parimalam&cm_sp=det-_-bdp-_-author)(2015) A Text Book of Interior Decoration, Satish serial publishing house

2. Premavathy Seetharaman and Parveen Pannu, (2009). Interior Design and Decoration. CBS Publishers and Distributors Pvt Ltd. New Delhi.

3. Goldstein, (1976). Art in Everyday Life. Oxford and IBH Publishing House.

4. Pratap Rao, (2020). Interior design Principles and Practice, Standers publishing company

**Supplementary readings**

1. Architectural digest
2. Inside outside
3. <https://theconstructor.org/building/basic-elements-principles-interior-design-buildings/20150/>
4. <https://ericaswansondesign.com/wordpress/wp-content/uploads/2010/05/E-Book-Final.pdf>

Mapping with Programme Outcomes

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| --- | --- | --- | --- | --- | --- |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | H | H | M | H |
| CO2 | H | H | H | M | H |
| CO3 | H | H | H | M | H |
| CO4 | H | H | H | M | H |
| CO5 | H | M | M | M | M |

PO – Programme Outcome, CO – Course outcome

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| --- | --- | --- |
| **SEMESTER: I**  **PART: III** | Core Practical – I : Fundamentals of Design Practicals 1 | **CREDIT: -**  **HOURS:3/W** |

**Course Objectives**

**Enable the students to**

1. Apply Design concepts and create designs.
2. Evaluating art objects on basis of elements and art of design.
3. Develop design motifs and apply in interiors.
4. Application of art principles in interior room arrangement.
5. Develop Designs using different lines on different media.

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| --- | --- | --- |
| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Introduction to lines, types of lines and their application using different media. Sketching and drawing of design composition using grids. | **5** |
| **Unit II** | Apply design concepts in developing concrete blocks, Stone cladding, Tiles cladding, Apparel border, floor decorations – flower carpet and rangoli. | **10** |
| **Unit III** | Develop a motif suitable for foot mat, stained glass, window grill, table mat and furnishing materials. | **10** |
| **Unit IV** | Evaluate the given art objects and market survey on material like canvas board, acoustic material, wood, metal, plastic and glass. | **10** |
| **Unit V** | Apply the art principles in arrangement of: Living room, drawing room, pooja room, bedroom, adolescent boys or girl’s room, children’s room and birthday party. | **10** |

**Course Outcomes**

1. Identify the types of lines used to create designs.
2. Apply the design principles in two dimensional and three-dimensional compositions
3. Create design for home furnishings and accessories
4. Apply the various elements of design in producing an interior space
5. Create tastefully decorated interiors with good motifs.

**Textbooks (In API Style)**

1. [Premalatha M.R. Andal A. Parimalam P.](https://www.abebooks.com/servlet/SearchResults?an=parimalam&cm_sp=det-_-bdp-_-author)(2015) A Text Book of Interior Decoration, Satish serial publishing house
2. Frida Ramsdet and Mia olaffson(2020) the interior design handbook, Furnish , decorate and style your space.
3. Seetharaman, P and Pannu, P.(2017) Interior Design and Decoration, CBS Publishers and Distributors, New Delhi
4. Pratap R.M (2018), Interior Design Principles and Practice, Standard Publishers Distribution, Delhi.

**Supplementary Readings**

1. Inside Outside Magazine
2. <https://www.designbasics.com/>
3. https://99designs.com/blog/tips/graphic-design-basics/

Mapping with Programme Outcomes

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| --- | --- | --- | --- | --- | --- |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | - | - | H | M |
| CO2 | H | H | H | H | H |
| CO3 | H | H | M | M | L |
| CO4 | H | M | M | M | H |
| CO5 | H | H | H | H | H |

PO – Programme Outcome, CO – Course outcome

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| --- | --- | --- |
| **SEMESTER:I**  **PART:III** | **COURSE CODE: 22UIDDA01**  Allied - I : Paper – 1: Residential Space Planning 1 | **CREDIT: 4**  **HOURS:4/W** |

**Course Objectives**

**Enable the students to**

* 1. Understand the concept of space.
  2. Learn to draw house plan.
  3. Acquire knowledge on institutions supporting housing activities in the Country.
  4. Develop skill to draft house plans for various income groups.
  5. Gain knowledge on housing situation in India

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Housing – Selection of site and functions of house. Basic principles of planning a life space - Orientation, Grouping, Roominess, Lighting, Circulation, Storage Facilities and Privacy. | **15** |
| **Unit II** | Types of house plans – Site plan, Floor plan, Elevation, Cross section and Perspective view. Organizing space plan - One Room Apartment, Twin Houses, Row houses and Multistorey building | **10** |
| **Unit III** | Creating a life space- Factors in planning different rooms – Living Room, Bed Room, Dressing Room, Dining, Kitchen, Study Room, Store room, Bathroom, Utility space, Staircase and Verandah. | **15** |
| **Unit IV** | Types of Doors – Hinged, Sliding, Swing, Revolving, Panelled and Louvered; Windows – Casement, Pivoted, Sliding, Bay window and Clerestory; | **10** |
| **Unit V** | Arches – Segmental, Semicircular, Pointed, Horseshoe and Florentine.  Roofs – Flat roofs – Madras Terrace and RCC Roof and Pitched roofs – Lean to, Couple roof, King post and Queen post. | **10** |

**Course Outcomes**

1. Demonstrate knowledge of space designing and its principles
2. Understand the Basic principles of spatial lay out to create well designed residential floor plans
3. Apply client’s needs to create effectively well-designed floor plans
4. Understand the factors that influence the buying, building or the renting of houses
5. Identify key issues in housing finance, affordability and technology systems.

**Textbooks (In API Style)**

* 1. Arora.S.P and Bindra S.P, (2010), Building Construction, Delhi: Dhanpat Rai Pulications, India.
  2. Francis D. Ching (2020) Building construction illustrated, Wiley publishers
  3. Bhavikatti, S.S and Chitawadgi, M.V, (2017), ‘Building and Drawing’, Hubli.publishers
  4. Maureen Mitton, (2018), Interior Design Visual Presentation-A Guide to Graphics, Models and Presentation Techniques’, New Jersey: John Wiley and Sons, USA.

**Supplementary Readings**

1. Inside Outside Magazine
2. <https://theconstructor.org/construction/project/basics-building-construction/25260/>
3. <https://www.civilgyan.com/basics-of-building-construction-process-step-by-step/>

**Mapping with Programme Outcomes**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | H | H | H | H |
| CO2 | H | H | H | H | H |
| CO3 | H | H | M | - | L |
| CO4 | H | M | M | H | H |
| CO5 | H | H | - | - | H |

PO – Programme Outcome, CO – Course outcome

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| --- | --- | --- |
| SEMESTER:IPART:III | Residential Space Planning Practicals 1 | CREDIT:-HOURS:3/W |

**Course Objectives**

**Enable the students to**

1. Gain an understanding on tools and techniques of drafting.
2. Know to draw he isometric view of furniture.
3. Learn the different kinds of furniture arrangement
4. Acquire knowledge in planning the room interiors
5. Design floor plans with all necessary dimensions

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Use of drawing instruments, Types of Lines used in engineering drawing, Lettering, Dimension and Use of Scales. | **5** |
| **Unit II** | Technical drawing - Isometric view of simple furniture – Table, Chair, Sofa, Dining table. | **10** |
| **Unit III** | Furniture arrangement of living room, bedroom, study room, dining and kitchen. | **10** |
| **Unit IV** | Understanding a building and its interiors in terms of plan, elevation and section. | **10** |
| **Unit V** | Floor plans for low-income, middle-income, and high-income group. Site plan and its features - Entry/Exit, Building layout, Pathways, Driveways, Parking lots and Landscape features. Create House plan according to Vastu elements. | **10** |

**Course Outcomes**

1. Experiment with drafting tools and techniques.

2. Analyze different ways of arranging furniture in a given space.

3. Design of simple layout for rooms.

4. Understand the features of Site plan.

5. Examine the Vaastu aspects of a house.

**Text Books**

1. Arora.S.P and Bindra S.P, (2010), Building Construction, Delhi: Dhanpat Rai Pulications, India.

2. Francis D. Ching (2020) Building construction illustrated, Wiley publishers

3. Bhavikatti, S.S and Chitawadgi, M.V, (2017), ‘Building and Drawing’, Hubli.publishers

4.Maureen Mitton, (2018), Interior Design Visual Presentation-A Guide to Graphics, Models and Presentation Techniques’, New Jersey: John Wiley and Sons, USA.

5. Kapil dev(2019) Engineering drawing, Asian publisher

**Supplementary Readings**

1. Inside Outside Magazine
2. <https://rskr.irimee.in/sites/default/files/Isometric%20Drawings.pdf>
3. <https://civilseek.com/isometric-drawing-projection/>

**Mapping with Programme Outcomes**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | H | H | H | H |
| CO2 | H | H | H | H | H |
| CO3 | H | H | M | L | L |
| CO4 | M | M | M | - | - |
| CO5 | H | - | M | - | H |

PO – Programme Outcome, CO – Course outcome

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| --- | --- | --- |
| SEMESTER: I  PART: IV | 22UENVS 18: ENVIRONMENTAL STUDIES | CREDIT: 2  HOURS: 2/W |

COURSE OBJECTIVES

1. To gain knowledge about the importance of environmental sciences and natural resources.
2. To learn the concept, structure and function of ecosystem and the importance of biodiversity.
3. To understand and gain knowledge about environmental pollution and management.
4. To impart knowledge about social issues and human population.
5. To acquire the skills for identifying and solving pollution problem.

UNIT - I: INTRODUCTION TO ENVIRONMENTAL SCIENCES: NATURAL RESOURCES:

Environmental Sciences – Relevance – Significance – Public awareness – Forest resources – Water resources – Mineral resources – Food resources – conflicts over resource sharing - Exploitation - Land use pattern - Environmental impact - fertilizer -PesticideProblems-casestudies.

UNIT - II:ECOSYSTEM, BIODIVERSITY AND ITS CONSERVATION:

Ecosystem – concept – structure and function producers, consumers and decomposers - Food chain - Food web - Ecological pyramids - Energy flow - Forest, Grassland, desert and aquaticeco system.

Biodiversity - Definition - genetic, species and ecosystem diversity - Values and uses ofbiodiversity - biodiversity at global, national (India) and local levels - Hotspots, threatstobiodiversity-conservationofbiodiversity-Insitu &Exsitu.

UNIT - III:ENVIRONMENTALPOLLUTIONANDMANAGEMENT

Environmental Pollution – Causes – Effects and control measures of Air, Water, Marine, soil, solidwaste, Thermal, Nuclear pollution and Disaster Management - Floods, Earth quake, Cyclone and Land slides.Role of individuals in prevention ofpollution-pollutioncasestudies.

UNIT - IV:SOCIALISSUES-HUMANPOPULATION

Urban issues - Energy - water conservation - Environmental Ethics - Global warming -Resettlement and Rehabilitation issues - Environmental legislations - Environmentalproduction Act. 1986 - Air, Water, Wildlife and forest conservation Act – Population growth and Explosion – Human rights and Value Education – Environmental Health- HIV/AIDS – Role of IT in Environment and Human Health – Women and child welfare – Public awareness – Case studies.

UNIT-V:FIELDWORK

Visittoalocalarea/localpollutedsite/localsimpleecosystem-Reportsubmission

COURSE OUTCOMES

After completion of this course, students will be able to gain knowledge in

1. The scope and importance of environmental science and natural resources.
2. The structure and functions of Ecosystem and biodiversity and its conservation.
3. The problem of environmental pollution and its management.
4. The social issues and human population.
5. They will identify and solve the pollution problem.

Text Books

1. Agarwal,K.C. (2008). *EnvironmentalBiology*, NidiPubl.Ltd.Bikaner.
2. Bharucha Erach, (2004). *Textbook for Environmental Studies,* UGC.
3. Odum, E.P., Odum, H.T. & Andrews, J. (1971). *Fundamentals of Ecology*. Philadelphia: Saunders.
4. Brusseau, M.L., Pepper, I.L., and Gerba, C. (2019). *Environmental and Pollution Science*. Academic Press, USA.
5. Primack R.B. (2014). *Essentials of Conservation Biology*, Oxford University Press, USA.
6. Raven, P.H, Hassenzahl, D.M., Hager M.C, Gift N.Y, and Berg L.R. (2015). *Environment*, (9th Ed.), Wiley Publishing, USA.
7. Rosencranz, A., Divan, S., and Noble M.L. 2002. Environmental Law and Policy in India: Cases, Material & Statutes. Oxford University Press.
8. Schmidtz, D., Shahar, D.C. 2018. Environmental Ethics: What Really Matters, What Really Works 3rd Edition, Oxford University Press, USA.
9. Sengupta,R.(Ed.) 2013. Ecological Limits and Economic Development. Oxford University Press, New Delhi, India.
10. Singh, J.S., Singh, S.P. and Gupta, S.R. 2017. Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi.
11. Stuetz R.M., and Stephenson T. (Eds.) (2009). *Principles of Water and Wastewater Treatment Processes (Water and Wastewater Process Technologies).* IWA Publishing, London, UK.
12. Sodhi, N.S., Gibson, L. and Raven, P.H. (Eds). (2013). *Conservation Biology: Voices from the Tropic*s. John Wiley & Sons.
13. Thapar, V. (1998). *Land of the Tiger: A Natural History of the Indian Subcontinent*. University of California Press, USA.
14. Warren, C.E. (1971). *Biology and Water Pollution Control*. WB Saunders.
15. Wilson, E.O. (2006). *The Creation: An Appeal to Save Life on Earth*. W.W. Norton & Company, NewYork, USA.
16. World Commission on Environment and Development. (1987). *Our Common Future*. Oxford University Press, USA.

Supplementary Readings

1. Kumarasamy,K.,A. Alagappa Moses and M.Vasanthy, (2004). *Environmental Studies*, Bharathidsan University Pub,1, Trichy.
2. Rajamannar, (2004). *Environemntal Studies*, EVR College Pub, Trichy.
3. Kalavathy,S. (ED.) (2004). *Environmental Studies*, Bishop Heber College Pub., Trichy.

OUTCOME MAPPING

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CO/PO | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | 3 | 3 | 3 | 3 | 3 |
| CO2 | 3 | 2 | 3 | 3 | 3 |
| CO3 | 2 | 3 | 3 | 2 | 3 |
| CO4 | 3 | 3 | 3 | 3 | 3 |
| CO5 | 3 | 3 | 2 | 3 | 3 |

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| **SEMESTER: II**  **PART: III** | **COURSE CODE:** 22UIDDC23  Core Course – III : Colour and Accessories | **CREDIT: 4**  **HOURS: 4/W** |

**Course Objectives**

To enable the students to

1. Learn the application of art principles, elements of design and color schemes in creating aesthetic interiors.
2. Learn the concepts of colour and preparing a colour wheel.
3. Analyze kinds of Accessories.
4. Apply, create and study the functional and decorative accessories in interiors.
5. Expose the students to folk arts and crafts of India.

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Colour: Definition, Qualities of colour, Hue, Value, Intensity. Tints and Shades. The colour wheel/systems - Prang colour system, Physicist’s Theory, Psychologist’s Theory. | **10** |
| **Unit II** | Harmonies of related colors - Monochromatic, Analogous and Accented Neutral; Harmonies of contrasting colours – Direct, double, split and triad. | **10** |
| **Unit III** | Accessories - Definition and importance in interiors, Classification – functional, decorative and both accessories. Factors influencing the selection of accessories, Placement, location and background for accessories. | **10** |
| **Unit IV** | Kinds of accessories - Decorative - mural, photographs, pictures, artifacts, drawings, antiques and Functional - books, Mirror, Clock, accent furniture, indoor plants and flower arrangement as miscellaneous accessories. | **15** |
| **Unit V** | Art and Crafts – definition, kinds of art and crafts-pot painting, idols, sculptures, glass painting, wall art, wall hanging, pillows, cushions, pebble art, wood art, shell art, origami, models, lamps and vases, baskets, doll making, bamboo crafts, folk arts and crafts of India, Application of arts and crafts in interiors. | **15** |

**Course Outcomes**

1. Identify the elements of Prang colour theories, Value, and Intensity scale.
2. Creating designs for different rooms by applying colour harmonies.
3. Analyze the importance, selection and arrangement of accessories in relation to background.
4. Criticize various Kinds of art forms used as accessories.
5. Appraise the folk-art styles in interiors.

**Textbooks**

1. Pratap Rao (2018), Interior design principles and practices, Standard Publications, Delhi.
2. Premavathy Seetharaman and Parveen Pannu, (2017). Interior Design and Decoration. CBS publishers.
3. The Practical Encyclopedia of Good Decorating and Home Improvement, Vol I.
4. Andal. A and Parimalam.P, (2015).A Text Book of Interior Decoration. Satish Serial Publishing House

**Supplementary Readings**

1. Inside Outside Magazine
2. <https://hmhub.in/accessories-interior-decoration/>
3. https://theinterioreditor.com/accessories/the-importance-of-accessories-the-dos-donts/

**Mapping with Programme Outcomes**

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| --- | --- | --- | --- | --- | --- |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | - | H | - | H |
| CO2 | H | H | M | M | H |
| CO3 | H | H | - | - | M |
| CO4 | M | H | H | - | H |
| CO5 | M | H | H | L | M |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:II**  **PART:III** | **COURSE CODE:** 22UIDDP24  Core Practical – I : Fundamentals of Design Practicals - 2 | **CREDIT:4**  **HOURS:3/W** |

**Course Objective**

**Enable the students to**

1. Develop skill in drawing motifs in various materials.
2. Differentiate structural and decorative design
3. Acquire knowledge in creating models of different rooms.
4. Learn current trends in interior design.
5. Develop skills related to design in tiles, fabrics and other materials

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Elements of design **-** Line and direction, Form and Shape, Size, Colour, Light, Pattern, Texture and Space. Application of elements of design in interior and exterior. | **10** |
| **Unit II** | Structural Designs and Decorative design - Naturalistic, Stylized, Abstract and Geometrical Design. | **10** |
| **Unit III** | Developing building models - showing details on exterior components – Windows/Glazing, Doors, Sunshades, Balcony, Wall Panel and Roof. | **10** |
| **Unit IV** | Creating designs with interior elements comprising furniture and other components. | **5** |
| **Unit V** | Develop designs in fabric design, tile design, accessories making, mural and collage waste art and crafts | **10** |

**Course Outcomes**

1. Determine the elements involved in planning a design.
2. Benefit from the hands-on experience gained for future career prospects
3. Distinguish structural and Decorative designs.
4. Develop exterior building models
5. Create motifs for various application in interiors.

**Text Books (In API Style)**

1. Pratap Rao (2018), Interior design principles and practices, Standard Publications, Delhi.
2. Premavathy Seetharaman and Parveen Pannu, (2017). Interior Design and Decoration. CBS publishers.
3. The Practical Encyclopedia of Good Decorating and Home Improvement, Vol I.
4. Andal. A and Parimalam.P, (2015).A Text Book of Interior Decoration. Satish Serial Publishing House

**Supplementary Readings**

* + - 1. Elle décor
      2. Architectural digest
      3. <https://www.pdfdrive.com/the-interior-design-book-e18833708.html>

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | - | H | H | - |
| CO2 | H | H | M | M | H |
| CO3 | L | H | - | - | L |
| CO4 | H | M | M | H | H |
| CO5 | H | H | H | M | M |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:II**  **PART:III** | **COURSE CODE: 22UIDDA02**  Allied – II : Paper -2 : Residential space planning 2 | **CREDIT:3**  **HOURS:4/W** |

**Course Objectives**

**Enable the students to**

1. Understand the concept of life space and principles of planning
2. Acquire knowledge on institutions supporting housing activities in the Country.
3. Identify the methods of construction
4. Develop skill to draft house plans for various income groups.
5. Understand the financial concepts and byelaws supporting building construction.

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Factors influencing interior residential spaces - Biological needs, ecological concerns, cultural influences, Psychological effects – privacy, personal space, territoriality, crowding, planning a space – people, location and orientation, resources available, Planning objectives – utility, economy, beauty and character. | **15** |
| **Unit II** | Planning space- concept, components and methods - Concept of space planning – functions of house, owning Vs. renting, Factors considered in selection of site, principles of planning, Components of building - foundation, flooring, walls, ceiling and roof. | **10** |
| **Unit III** | Methods of construction-load bearing and framed structure, Levels of construction, Allocation of space for various activities – Social space, work space and private space. | **10** |
| **Unit IV** | Space plan - One Room Apartment, Twin Houses, Row houses and Multistorey flats. Floor plans for low, middle and high income group. Site plan and its features - Entry/Exit, Building layout, Pathways, Driveways, Parking lots and Landscape features. Vaastu House plan. | **15** |
| **Unit V** | Institutions supporting housing 15  Financial institutions - HDFC, HUDCO, Nationalised Bank and LIC, Research Institutions - NBO, CBRI, SERC, Standards Institutions – Need for standardisation, types of standards, BIS and its role. | **10** |

**Course Outcomes**

1. Demonstrate knowledge of space designing and its principles
2. Apply basic principles of spatial lay out to create well designed residential floor plans
3. Analyze and apply client’s needs to create effectively well-designed floor plans
4. Understand the factors that influence the buying, building or the renting of houses
5. Identify key issues in housing finance, affordability and technology systems

**Text Books (In API Style)**

1. Arora.S.P and Bindra S.P, (2010), Building Construction, Delhi: Dhanpat Rai Pulications, India.
2. Francis D. Ching (2020) Building construction illustrated, Wiley publishers
3. Bhavikatti, S.S and Chitawadgi, M.V, (2017), ‘Building and Drawing’, Hubli.publishers
4. Maureen Mitton, (2018), Interior Design Visual Presentation-A Guide to Graphics, Models and Presentation Techniques’, New Jersey: John Wiley and Sons, USA.
5. Kapil dev(2019) Engineering drawing, Asian publisher.

**Supplementary Readings**

1. <https://foyr.com/learn/definitive-guide-to-space-planning-in-interior-design/#:~:text=Space%20planning%20describes%20the%20process,of%20the%20interior%20design%20process>
2. Better homes and garden
3. Traditional home magazine.

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | M | H | M | L |
| CO2 | H | H | - | - | L |
| CO3 | H | H | M | M | L |
| CO4 | M | M | - | - | M |
| CO5 | H | M | M | - | H |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:II**  **PART:III** | **COURSE CODE:** **22UIDDP02**  Allied Practical – I : Residential space planning practicals 2 | **CREDIT:3**  **HOURS:3/W** |

**Course Objectives**

1. Gain an understanding on tools and techniques of drafting.
2. Acquire knowledge in planning the room interiors.
3. Plan design for landscape area
4. Organize labour saving equipment for various rooms.
5. Learn different types of kitchen

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Technical drawing - Isometric view of simple furniture – Table, Chair, Sofa, Dining table. | **5** |
| **Unit II** | Drafting -Symbols; standards used in drawing house plans, Drawing house plans for various income group – low, middle and high, Reading and judging house plans | **10** |
| **Unit III** | Land scape plan- layout,garden area, drive way, patio set, private public garden plan | **10** |
| **Unit IV** | Labour saving Equipment arrangement in living room, bedroom, study room, dining and kitchen. | **10** |
| **Unit V** | Kitchen Design- l shaped, u shaped, island.one wall/ galley kitchen | **10** |

**Course Outcomes**

1. Experiment with drafting tools and techniques.

2. Analyze symbols, standards used in floor plan.

3. Design simple layout for landscape

4. Priortize the area for labour saving equipment.

5. Examine the kinds of kitchen.

**Text Books (In API Style)**

* + - 1. Nancy wolford (2015) kitchen and bath design principles, Wiley publishers
      2. Joseph Deciarra (2017) time saver standards for interior design and space planning, Mc grawhill education
      3. Chris Grimley(2018) interior design specification, rock port publishers

**Supplementary Readings**

<https://www.smartdraw.com/landscape-design/>

Better homes and garden

<https://www.landscapingnetwork.com/landscape-design/plans.html>

**Mapping with Programme Outcomes**

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | L | H | H | H |
| CO2 | H | M | L | L | M |
| CO3 | H | H | H | H | H |
| CO4 | M | M | - | - | - |
| CO5 | H | M | L | - | - |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER: II**  **PART:III** | **COURSE CODE:** 22UIDDE26  Internal Elective – I: Building Materials | **CREDIT:3**  **HOURS:3/W** |

**Course Objectives**

**Enable the students to**

1. Gain knowledge on concepts, types and use of building materials and selection tactics
2. Learn use of materials at different levels or stages of a building construction and aesthetic concepts of using finishes in buildings.
3. Identify the materials used for wall and floor finishes
4. Learn different kinds of materials used for roofs and ceilings
5. Differentiate ideologies: traditional vs recent building materials and their usage

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Introduction  Meaning and concept of building materials  Classification of building materials  Components of a building – Sub structure and superstructure and use of specific building materials. | **10** |
| **Unit II** | Construction materials  Materials used at various levels of building – foundation, basement, plinth, wall, roof, ceiling, flooring, beams and columns. Use, types, characteristics, advantages and disadvantages of brick, stone, sand, cement, wood, metals, glass and plastic. | **10** |
| **Unit III** | Finishing materials  Wall finishes – plastering, white washing, paint, wall paper, wood panelling, metal wall covers, tiles; use, selection, merits and demerits  Floor finishes – cement, mosaic, marble, tiles, wood, asphalt tiles, resilient materials; use, selection, merits and demerits.  Finishes applied to other areas. | **10** |
| **Unit IV** | Roof and ceiling materials  Roof – wood, metal, slate, tile, asphalt shingles, glass fibre shingles  Ceiling - false ceiling, plaster of paris, metal, glass, wood, acoustical ceiling materials, light ceiling – thermocol; use, selection, merits and demerits | **10** |
| **Unit V** | Recent advances in building materials and finishes  Construction materials, interior finishes and exterior finishes, partition materials. Approximate cost of building materials and finishes.  Concept of green building materials. | **5** |

**Course Outcomes**

1. Identify and select proper construction materials and finishes for building construction
2. Demonstrate knowledge of properties of various building materials
3. Describe usage and characteristics of building materials and finishes for strength, durability and aesthetics.
4. Explain the components of a building and analyse the availability of materials for building construction
5. Interpret construction materials Vs finishes & interior Vs exterior materials

**Text Books (In API Style)**

1. Arora, S.P and Binddra, S.P., (2018) A Text book of building Construction. New Delhi: Dhanpat Rai Publications,India.
2. Rangwala, S.C., (2011). Engineering Materials. Gujarat: Charotar Publishing House, India.
3. Rangwala, S.C, (2022). Building Construction. Gujarat: Charotar Publishing House, India.
4. Punmia BC(2016) Building construction, charotar publishing house

**Supplementary Readings**

Architectural digest

<https://www.sciencedirect.com/journal/construction-and-building-materials>

<https://www.masterclass.com/articles/building-materials-guide>

<https://theconstructor.org/building/types-of-building-materials-construction/699/>

**Mapping with Programme Outcomes**

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| --- | --- | --- | --- | --- | --- |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | L | - | - | L |
| CO2 | H | H | - | M | M |
| CO3 | H | M | - | - | M |
| CO4 | H | H | H | H | H |
| CO5 | H | M | M | M | H |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER: III**  **PART:III** | **COURSE CODE:** 22UIDDC33  Core Course – IV : Applied art on Textiles | **CREDIT:4**  **HOURS:4/W** |

**Course Objectives**

To enable the students to

1. Understand the types of fibers, yarns and basic weaves
2. Understand art and apply its principles in the creation and selection of textiles.
3. Know about the effects of various textile finishes.
4. Develop design in textiles and apply the same on materials.
5. Gain knowledge on printing and dyeing methods

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Fundamentals of textiles – fiber – meaning, Types – filament fibre and staple fibre. Classification – natural – vegetable fibre, animal fibre , mineral fibre and manufactured fibre, Yarn – meaning, yarn twist- S twist, Z twist, yarn count, classification – single, ply, cord and novelty yarns. Properties of cottonfibre. Manufacturing process of cotton yarns. | **10** |
| **Unit II** | Fabric construction – Weaving – meaning, Major parts of a loom – warp beam, heddles, harnesses, reed, shuttles, cloth roll. Basic weaving operation – weaving process - shedding, picking, beating up, taking up and letting off. Types of weave – Basic weave – plain – basket and ribbed, Twill - herringbone and satin - sateen. Fancy weave – Jacquard. | **15** |
| **Unit III** | Dyeing and printing – Dyes- definition, types- natural dyes and synthetic dyes, Mordants – meaning. Dyeing –meaning, stages of dyeing- fiber dyeing, yarn dyeing and fabric dyeing. Textile printing – meaning, Hand printing techniques–block printing, screen printing and stencil printing. Machine printing- roller printing, screen printing, heat transfer printing and blotch printing. | **10** |
| **Unit IV** | Fabric Finishes – definition, Meaning of aesthetic finish and functional finish. Importance of textile finishes, Effects of different finishing process on fabrics – bleaching process, tentering process, mercerizing process, sanforizing process, napping process, calendaring process and sizing process. Special finishes – water repellent, fire proof, moth proof, anti-microbial, and stain proof. | **15** |
| **Unit V** | Application of art principles – harmony, balance, proportion, rhythm, and emphasis in the selection of soft furnishings in interiors. Use of elements of design – line, size, shape, form, colour, texture and pattern in the selection of fabric for interiors. Application of relate colour harmonies and contrasting colour harmonies in different fabrics. | **10** |

**Course Outcomes (five outcomes for each unit should be mentioned)**

1. Understand the types of fibers, yarns and basic weaves.
2. Create textile designs by applying its principles.
3. Familiar with effects of various textile finishes.
4. Create a design on textile materials.
5. Implement the art principles on different fabrics.

**Text Books (In API Style)**

1. Corbmann B P, Textiles – Fiber to fabric, International students edition, McGraw Hill book Co, Singapore 1985.
2. Asis Patnaik and swetha patnaik (2019)Fibres to smart textiles , CRC press
3. Helmut New mann(2020) textile of India, Prestel publisher
4. Deepali Rastogi and chopra sheetal,(2017) textile science, Orient black sawn pub;isher
5. Jasleen Dhamija, The Indian folk, Arts and crafts, National Book Trust India, New Delhi, 1992.
6. Mary Mathews, Bhattarams reprographics, Pvt.Ltd., Chennai 1974.

**Supplementary Readings**

1. Textile design
2. Furnishings home decor
3. Society Interiors

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | M | M | M | - | - |
| CO2 | H | H | - | - | L |
| CO3 | M | M | - | - | M |
| CO4 | L | L | H | H | M |
| CO5 | H | H | M | - | M |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:III**  **PART:III** | **COURSE CODE:** 22UIDDP34  Core Practical – II : Applied Art on Textiles practical - 1 | **CREDIT:-**  **HOURS:3/W** |

**Course Objectives**

1. Acquire skill in making different types of prints.
2. Learn various embroideries practiced in different states of India
3. Know the techniques of tatting and
4. Learn types of crocheting.
5. Develop knowledge in Different strokes and techniques in fabric painting

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Printing:   1. Stenciling 2. Batik 3. Screen Printing 4. Tie and Dye 5. Block Printing | **10** |
| **Unit II** | Embroideries of India- : Kantha of Bengal, Kasuti of Karnataka, Pulkari of Punjab, Chikankari of Lucknow, Kutch work of Gujarat | **10** |
| **Unit III** | Tatting | **10** |
| **Unit IV** | Crocheting | **10** |
| **Unit V** | Fabric painting using different strokes and techniques | **5** |

**Course Outcomes**

* + 1. Demonstrate their imagination and creativity in printing.
    2. Develop new design of embroideries,
    3. Create new patterns in tatting
    4. Analyse different techniques in crocheting.
    5. Judge the features of various printing and decoratie stitches techniques.

**Text Books (In API Style)**

1. Corbmann B P, Textiles – Fiber to fabric, International students edition, McGraw Hill book Co, Singapore 1985.
2. Asis Patnaik and swetha patnaik (2019)Fibres to smart textiles , CRC press
3. Helmut New mann(2020) textile of India, Prestel publisher
4. Deepali Rastogi and chopra sheetal,(2017) textile science, Orient black sawn pub;isher
5. Jasleen Dhamija, The Indian folk, Arts and crafts, National Book Trust India, New Delhi, 1992.
6. Mary Mathews, Bhattarams reprographics, Pvt.Ltd., Chennai 1974.

**Supplementary Readings**

1. Textile Design
2. Textile painting
3. <https://www.diva-portal.org/smash/get/diva2:876940/FULLTEXT01.pdf>
4. https://www.pdfdrive.com/the-pattern-base-over-550-contemporary-textile-and-surface-designs-e195007275.html

**Mapping with Programme Outcomes**

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | **M** | **M** | **M** | **-** | **-** |
| CO2 | **H** | **H** | **-** | **-** | **L** |
| CO3 | **M** | **M** | **-** | **-** | **M** |
| CO4 | **L** | **L** | **H** | **H** | **M** |
| CO5 | **H** | **H** | **M** | **-** | **M** |

PO – Programme Outcome, CO – Course outcome

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| **SESMESTER:III**  **PART:III** | 22UIDDA03 : Allied – II : Paper – 1 : Furniture Design | **CREDIT: 4**  **HOURS: 4/W** |

**Course Objectives**

**Enable the students to**

1. Gain knowledge on selection, arrangement of furniture
2. Developing skills in care and maintenance of furniture
3. Learn to know the Steps involved in construction of furniture
4. Differentiate types and styles in furniture - use and process in furniture construction, joints.
5. Know about different furniture materials and finishes.

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Introduction to furniture. Meaning and importance, Styles of furniture - traditional, contemporary and modern design. Classification - Furniture for comfort, rest and relaxation, work and storage, built-in and portable, Factors influencing furniture decisions - family needs, preferences, availability, principles of design and financial limit. Factors to be considered in furniture selection and tips to buy furniture. | **20** |
| **Unit II** | Materials used in furniture construction - Familiar furniture materials - Wood - teak, rose wood, walnut, cedar, mahogany, pine, birch, sal, ply wood, veneers bamboo, cane, metals, plastics, leathers, fabrics, glass. | **10** |
| **Unit III** | Steps involved in construction of wooden furniture - Shaping, carving, turning, fluting, reeding and joining of furniture - types of joints - Upholstered furniture - meaning, upholstering - types, method sand materials used. | **10** |
| **Unit IV** | Selection and Arrangement of furniture**—**Factors to be considered in the selection of furniture, buy man ship, arrangement of furniture for various rooms - Living room, dining room, bedroom, kitchen, study room, office. | **10** |
| **Unit V** | Care and maintenance of furniture. Care of different types of furniture - wood, metals, plastic, and cane. Furniture polishes - types, natural and synthetic varnishes**,** other types of furniture finishes. | **10** |

**Course Outcomes**

1. Classify and compare different kinds of furniture
2. Distinguish the importance of furniture in spaces,
3. Assess the selection factors in furniture
4. Analyze the construction methods of furniture design
5. Create a design based on the assessment and construction techniques of furniture

**Textbooks (In API Style)**

1. Frida Ramsdet(2020) Interior design handbook, Particular book publishers.
2. Wilhide, E and Cope stick, I. (2010) contemporary decorating, conron octopus Ltd., London.
3. Premavathy Seetharaman and Parveen Pannu, (2017). Interior Design and Decoration. CBS publishers.
4. Fredreick J Bryant(2010) working drawings of colonial furniture, Toolmera press.
5. Faulkner. R and Faulkner. S, (1987), Inside today’s home, Rinehart Winston, New York.
6. Premalata Mullick.P, (2016), Textbook of Home science, Kalyani publishers, New Delhi.

**Supplementary Readings**

1. Ideal homes
2. <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=26978>
3. <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=26999>
4. <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=27015>

**Mapping with Programme Outcomes**

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| --- | --- | --- | --- | --- | --- |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | M | L | L | - |
| CO2 | H | M | - | - | M |
| CO3 | M | M | - | - | L |
| CO4 | H | M | - | M | - |
| CO5 | M | M | H | H | M |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER: III**  **PART: III** | Allied Practical – II: Furniture design practical 1 | **CREDIT: -**  **HOURS:2/W** |

**Course Objectives**

1. Understand the principles related to furniture design.
2. Gain an understanding on the basic principles of designing a furniture for a house and
3. Develop knowledge on furniture arrangement.
4. Get familiarized with the different styles of furniture used and also the materials used.
5. Acquire practical knowledge in designing space saving furnitures for different family needs

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Draft furniture design – sofa, chair, and table. Develop designs and types of furniture design with regard to activity  2.. | **5** |
| **Unit II** | D Developing furniture templates for different kinds of furniture. | **5** |
| **Unit III** | Market survey of furniture materials, cost estimation of furniture materials, size and measurement of various furniture | **5** |
| **Unit IV** | Design any two traditional furniture type – chair  Design a modern furniture- sofa set  Design a contemporary furniture- tea table | **10** |
| **Unit V** | Planning furniture layouts for different rooms and activities using templates - Living room, bedroom and dining room | **5** |

**Course Outcomes:**

1. Create design in furniture like sofa chair and table

2. Develop furniture templates based on activity area

3. Develop skill in furniture cutout

4. Create design for sofa, chair and tea table.

5. Develop skill in furniture layout for different room.

# Textbooks:

# 1. Frida Ramsdet(2020) Interior design handbook, Particular book publishers.

# 2. Wilhide, E and Cope stick, I. (2010) contemporary decorating, conron octopus Ltd., London

# 3. Chaudhari.S.N, (2006), “Interior Design”, Jaipur: Aavishka rPublisher,India.

# 4. Stepat.D.Van, (2011), “Introduction to Home Furnishing”, New York: The MacMillan Company.

# 5. Premavathy .S, Sonia.B and Preeti. M, (2017), “Interior design and Decoration”, New Delhi: CBS Publishers & Distributors,India.

**Supplementary Readings:**

1. Furniture design

2. Inside outside magazine

3. <https://www.indiefolio.com/project/579871df7e290/detail-drawings>

4. <https://www.woodmagazine.com/woodworking-how-to/design-drawing-furniture-styles>

**Mapping with Programme Outcomes**

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | M | L | L | - |
| CO2 | H | M | - | - | M |
| CO3 | M | M | - | - | L |
| CO4 | H | M | - | M | - |
| CO5 | M | M | H | H | M |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER: III**  **PART:III** | **COURSE CODE:** 22UIDDE36  Internal Elective – II: Building Finishes | **CREDIT:3**  **HOURS: 3/W** |

**Course Objectives**

Enable the students to

1. Understand the special need of walls.
2. Learn the Classification of wall finishes
3. Know the materials and Finishes required for kitchen
4. Study different kinds of materials used for roofing
5. Gain knowledge on different materials available in the market to increase the strength of a building.

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Wall finishes – Interior Wall- Wood, glass, paints, tiles, terracotta, marble wash, metals, stone finishes, marble, cladding – stone cladding tile cladding, tiles, granite, whitewash, color wash, selection, laying, cost estimation, care and maintenance.  Exterior Walls- Stones, rubble, tiles, fresco, plaster of Paris, murals, glass and metals, paints, plastering. cladding – stone cladding and tile cladding,  Selection, laying, cost estimation, care and maintenance. | **10** |
| **Unit II** | Wall mural, Wall papers – Kinds of wall papers. uses, selection, merits, and demerits.  Paint – Classification of paints - Water Based (Distemper – Acrylic and Synthetic properties and emulsion – Interior and Exterior) and Oil Based – Uses of oil base painting. | **10** |
| **Unit III** | Floor finishes - Interior floors - Mud, cement, red oxide, terrazzo, wood, metals, resilient flooring, Hard and soft, mosaic, tiles, nano technology tiles, marble, granite and floor coverings-rugs and carpets, selection, laying, cost estimation, care and maintenance.  Exterior floors - Concrete slabs, tiles, mosaic, terrazzo and terracotta.  Selection, specialty and characteristics of exterior floor finishes, laying, care and maintenance. | **10** |
| **Unit IV** | Roof – wood, metal, slate, tile, asphalt shingles, glass fibre shingles Ceiling - false ceiling – Gypsum board, plaster of paris, metal, glass, wood, acoustical ceiling materials, light ceiling – thermocol; use, selection, merits and demerits. | **5** |
| **Unit V** | Materials and finishes used in green building - Bamboo, straw bale, recycled plastic, wood, Recycled stone, non-toxic metals, Earth blocks-compressed, rammed and baked, flax linen, sisal, wood fibres, cork, coconut, non- VOC paints and polyurethane block.  Selection, laying, cost estimation, care and maintenance of wall, Roof/Ceiling and Floor Finishes. Application of various recent trends in interior and exterior finishes. Approximate cost of building finishes. | **10** |

**Course Outcomes**

1. Apply the Fundamentals of interior and exterior treatments based on climate, cost, style and location.
2. Compare the types of structural and applied wall finishes.
3. Analyze the different treatments of ceiling finish with innovative materials
4. Classify the types of Hard, semi-hard and soft floor finishes.
5. Select and apply the various finishes based on care and maintenance

**Text Books**

# Chaudhari.S.N, (2006), “Interior Design”, Jaipur: Aavishka rPublisher,India.

# 4. Stepat.D.Van, (2011), “Introduction to Home Furnishing”, New York: The MacMillan Company.

# 5. Premavathy .S, Sonia.B and Preeti. M, (2017), “Interior design and Decoration”, New Delhi: CBS Publishers & Distributors,India.

1. Love.G. (2000), Insideout, Conron octopus Ltd, London.
2. Ostrow.J. (2001), Painting rooms, Rockport publishers, USA.
3. Spancer, H. and Churchill, (1990), Classic English Interiors, Anaya Publishers Ltd,

**Supplementary Readings**

1. Inside Outside
2. <https://www.vskills.in/certification/tutorial/roofing-and-ceiling/>
3. Contemporary furniture by creativity 13 2018

Mapping with Programme Outcomes

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| --- | --- | --- | --- | --- | --- |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | - | H | H | - |
| CO2 | H | H | M | M | H |
| CO3 | L | H | - | - | L |
| CO4 | H | M | M | H | H |
| CO5 | H | H | H | M | M |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER: III**  **PART:IV** | **COURSE CODE:** 22UIDDN37  Non Major Elective – I : Basics of Soft Furnishings | **CREDIT: 2**  **HOURS: 2/W** |

**Course Objectives**

1. Understand the importance of furnishings in interiors

2. Learn about types of windows and window treatments

3. Classify the kinds of furnishing according to different areas.

4. Learn the kinds and importance of floor coverings

5. Familiarize about the care and maintenance of soft furnishings.

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Soft furnishings – Meaning, Importance – relationship of furnishings with space, selection and use of furnishings – functional and decorative. | **5** |
| **Unit II** | Window Treatments – Types of windows, curtains, draperies, hanging curtains - types of pleats, pelmets and valances, accessories, blinds and shades. | **5** |
| **Unit III** | Types of furnishings - Cushion, cushion covers, slipcovers, bed linens, Table linens, kitchen linen, and bath linen. | **10** |
| **Unit IV** | Floor coverings - Carpets –Meaning, Importance, Types – woven and nonwoven, selection and laying – factors to be considered, Rugs –Meaning, Types –room size, area, scattered, accent. Difference between carpets and rugs. | **5** |
| **Unit V** | Care and maintenance of soft furnishings – stain removal, mending and darning, laundering, storage of furnishings. | **5** |

**Course Outcomes**

1. Understand the importance and relationship of furnishing in interiors

2. Compare and classify different kinds of window and window treatments

3. Assess and apply various types of furnishings according to the needs of inmates

4. Judge the quality of various floor coverings and imply the suitable floor covering to the interiors

5. Analyze he care and maintenance of various soft furnishings

**Text Books (In API Style)**

1. Premavathy seetharaman & S. Parveen pannu(2017) Interior Design and Decoration, CBS Publishers ltd

2. S. Pratap rao( 2017) A text book of interior decoration ,Jaideep publishers

3. Andal. A and Parimalam.P, (2015).A Text Book of Interior Decoration. Satish Serial Publishing House

**Supplementary Readings**

* + - 1. “Collins Complete Book of Soft Furnishings” by Jane Churchill
      2. Pillows, Curtains, and Shades Step by Step: 25 Soft-Furnishing Projects for the Home” by DK

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | H | M | - | L |
| CO2 | H | H | M | M | H |
| CO3 | L | M | - | - | L |
| CO4 | H | M | M | - | H |
| CO5 | H | H | - | - | L |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER: III**  **PART:III** | **COURSE CODE:** 22UIDDS38  Skill Based Subject – I - Free Hand Sketching | **CREDIT: 2**  **HOURS: 2/W** |

**Course Objectives**

1. Learn to use various lines, to develop a drawing, understand the importance of free hand sketching.
2. Acquire basics of drawing and sketching exercises.
3. Learn to draw still life and object drawings
4. Know and effectively use different mediums of sketching.
5. Apply and develop designs in object drawing, furniture detailing and landscape sketching.

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Drawing & sketching – Meaning and concept, Materials - Different sketching and drawing mediums. Knowledge about usage of different points of pencils, handling of pencils. Drawing sheets and its sizes. | **5** |
| **Unit II** | Drawing & sketching exercises –Simple exercises in drafting, point and line, line types, line weights, straight and curvilinear lines, dimensioning, lettering, borders, title panels, tracing in pencil, ink, use of tracing cloth. | **10** |
| **Unit III** | Exercises of object drawings – natural geometric forms with emphasis on depth and dimension, detail & texture, sunlight & shadow using different mediums. | **5** |
| **Unit IV** | Furniture sketching - perspectives, lighting & composition, textures and details, individual pieces of furniture using different media. | **5** |
| **Unit V** | Landscape sketching - still life pictures, natural and man-made landscaping, perspectives, lighting & composition, textures and details, using different media. | **5** |

**Course Outcomes**

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| 1. Understand the concept of drawing and sketching and to know the basic material and mediums used for sketching. |
| 1. Understand the basic sketching exercises and techniques. |
| 1. Application of drawing and sketching exercises in object drawing. |
| 1. Application of different mediums in furniture sketching. |
| 1. Developing landscape designs using the detailing exercises in different mediums. |

**Text Books (In API Style)**

1. Bhatt, N.D. and Panchal V.M(2010).Engineering Drawing: Plane and Solid Geometry, 42nd ed. Charotar Pub., Anand, .
2. Bies, D.John. (2018)Architectural Drafting: Structure and Environment Bobbs – Merril Educational Pub., Indianapolis.
3. Francis D. Ching (2018)– Architectural Graphics, Wiley publishers

**Supplementary Readings**

1. Architectural Desigm
2. <https://etchrlab.com/blogs/news/freehand-techniques#:~:text=Freehand%20drawing%20is%20the%20ability,we%20draw%20it%20by%20hand>.
3. <https://civilseek.com/free-hand-sketching/>

**Mapping with Programme Outcomes**

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| --- | --- | --- | --- | --- | --- |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | - | H | H | - |
| CO2 | H | H | M | M | H |
| CO3 | L | H | - | - | L |
| CO4 | H | M | M | H | H |
| CO5 | H | H | H | M | M |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER: IV**  **PART:III** | **COURSE CODE:** 22UIDDC43  Core Course – V: Surface Enrichment of Textiles | **CREDIT: 4**  **HOURS: 5/W** |

**Course Objectives**

1. Understand the importance of surface enrichment of textile
2. Account the various kinds of traditional embroidery of India
3. Regenerate the ideas of tribal embroidery among the students
4. Identify the decorative embellishments done on fabric
5. Examine the process of crochet and knitting.

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Surface enrichment of textiles: need, importance and different kinds of fabrics. Preparation of fabric before enrichment process. Painting techniques- free hand, dry stroke, wet stroke, spray, sponging, and stencil painting. | **15** |
| **Unit II** | Traditional Indian embroidery – History, types of embroidery of different state of India – Kutch, Kathiwar, Sindli, Pulkari, Kantha, kasuthi, Chambarumal, Gold & silver embroidery, Zardosi, Chikankari, Kashida- Material, motifs, colour, stitches, technique, relevance | **15** |
| **Unit III** | Tribal painting and Embroidery – Introduction, Types – Nagaland, Manipuri, Lambadi, Thoda with their traditional influence, symbolism, techniques, fabric, stitches & colour combination. | **15** |
| **Unit IV** | Cutwork, Mirror work, beads and Sequins, Patch work, Applique Quilting-Introduction, tools, material & techniques | **15** |
| **Unit V** | Crochet – Introduction, tools, material, techniques and types. Knitting – Basic, Texture, Rib, Diagonal, lace pattern, cable pattern, Cross, Knotted. Special techniques-Braiding, Hooking and Smocking. | **15** |

**Course Outcomes**

1. Understand the need and importance of surface enrichment of textiles

2. Classify the traditional types of embroidery and compare them

3. Assess the tribal embroidery and regenerate the tribal painting

4. Create designs based on the types of decorative embroideries

5. Generate new patterns and design using crochet and knitting.

**Text Books (In API Style)**

1. Corbmann B P, Textiles – Fiber to fabric, International students edition, McGraw Hill book Co, Singapore 1985.

2. Asis Patnaik and swetha patnaik (2019)Fibres to smart textiles , CRC press

3. Helmut New mann(2020) textile of India, Prestel publisher

4. Deepali Rastogi and chopra sheetal,(2017) textile science, Orient black sawn pub;isher

5. Jasleen Dhamija, The Indian folk, Arts and crafts, National Book Trust India, New Delhi, 1992.

Mary Mathews, Bhattarams reprographics, Pvt.Ltd., Chennai 1974

**Supplementary Readings**

1. 100 First crochet Lesley stanfield978-1-84340-612-9
2. 101 Folk embroidery and traditional handloom weaving Shailaja D. Naik

**Mapping with Programme Outcomes**

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | **H** | **H** | **M** | **-** | **L** |
| CO2 | **H** | **H** | **M** | **M** | **H** |
| CO3 | **L** | **M** | **-** | **-** | **L** |
| CO4 | **H** | **M** | **M** | **-** | **H** |
| CO5 | **H** | **H** | **-** | **-** | **L** |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER: IV**  **PART:III** | **COURSE CODE:** 22UIDDP44  Core Practical – II : Applied Art on Textiles practical - 2 | **CREDIT:4**  **HOURS:4/W** |

**Course Objectives**

1. Practice fabric painting techniques.

2. Understand the process of traditional embroideries

3. Analyze the different tribal painting and apply them in interiors

4. Apply applique cutwork and other techniques in furnishing materials

5. Know the making of knitting and crocheting.

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Different kinds of fabric painting techniques- Stroke, blending, spraying and stenciling. | **15** |
| **Unit II** | Traditional embroideries- Kasuti, Kantha, Chikankari, Phulkari | **15** |
| **Unit III** | Tribal painting and embroideries- warli, toda, gota, saura, bhils | **15** |
| **Unit IV** | Applique and patch work, cutwork, aari, mirror work | **15** |
| **Unit V** | Knitting- Accessory covers and crocheting- table mats, tea coasters | **15** |

**Course Outcomes**

1. Applying various painting techniques in the textile materials

2. Designing patterns on the materials of interiors using traditional embroidery

3. Regenerate ideas using tribal embroideries

4. Develop designs using various decorative stitching and methods

5. Apply crochet and knitting in makig household linen

**Text Books (In API Style)**

1. Corbmann B P, Textiles – Fiber to fabric, International students edition, McGraw Hill book Co, Singapore 1985.

2. Asis Patnaik and swetha patnaik (2019)Fibres to smart textiles , CRC press

3. Helmut New mann(2020) textile of India, Prestel publisher

4. Deepali Rastogi and chopra sheetal,(2017) textile science, Orient black sawn pub;isher

5. Jasleen Dhamija, The Indian folk, Arts and crafts, National Book Trust India, New Delhi, 1992.

6. Mary Mathews, Bhattarams reprographics, Pvt.Ltd., Chennai 1974

**Supplementary Readings**

1. First crochet Lesley stanfield978-1-84340-612-9

2. 101 Folk embroidery and traditional handloom weaving Shailaja D. Naik

**Mapping with Programme Outcomes**

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| --- | --- | --- | --- | --- | --- |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | **H** | **H** | **M** | **-** | **L** |
| CO2 | **H** | **H** | **M** | **M** | **H** |
| CO3 | **L** | **M** | **-** | **-** | **L** |
| CO4 | **H** | **M** | **M** | **-** | **H** |
| CO5 | **H** | **H** | **-** | **-** | **L** |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:IV**  **PART:III** | **22UIDDA04 :**  Allied – II: Paper – 2: Furniture finishes | **CREDIT:3**  **HOURS:4/W** |

**Course Objectives**

1 Identify the preparation of finishes for furniture

2. Apply sanding technique for furniture finishes

3. Understand staining methods in preparing furniture

4. Classify the kinds of filling in preparation of furniture

5. Distinguish different lacquering and polishing tchniques

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Preparation of Furniture For Finishing- preparation for finishing such as removing excess glue. Wood surfaces with rot Iron and cloth Burn in method filler materials, wood pegs or plugs. Bleaching and kinds of bleaches, safety in bleaching and application of bleaches | **10** |
| **Unit II** | Sanding- Meaning, coated abrasives, use of sand papers, use of stationery and portable sanders. Portable Sander kinds- finishing portable belt sander & rotary active sander. Stationary sanders – belt sander, disc, sander, spindle sander and hand stroke belt sander. Hand sanding – Important steps to be followed in sanding | **10** |
| **Unit III** | Finishing of Furniture- sap staining, ingredients advantages and disadvantages apply of wash coat. Oil stain – ingredient advantages and disadvantages apply of NGR stain. Non grain raining (NGR) stain – advantages & disadvantages. Non – grain – raising (NGR) stain – advantages & disadvantages – apply of NGR stain. Wash coat – its purpose- apply of wash coat | **15** |
| **Unit IV** | Filling- Meaning, kinds of fillers – paste & liquid – applying paste & liquid fillers. Sealing and applying a sealer. Finishing-oil finishes – linseed oil finish – applying oil finish. Lacquering & shellac – uses and types of shellac | **15** |
| **Unit V** | Polishing- French polishing& cellulose lacquer. Various ingredients and kinds of lacquer, advantages and disadvantages of lacquer finish. Usage of lacquer thinners & lacquer finishing schedule. Process of staining and filling before applying lacquer | **10** |

**Course Outcomes**

* + - 1. Understanding the preparation of furniture for furnishing process.
      2. Compare and classify different types of sanders
      3. Analyze the finishing process for furniture staining
      4. Classify the kinds of filling process.
      5. Judge the polishing methods and apply the possible method for different furniture materials.

**Text Books (In API Style)**

1. Arora, S.P and Binddra, S.P., (2013) A Text book of building Construction. New Delhi: Dhanpat Rai Publications,India.
2. Rangwala, S.C., (2018). Engineering Materials. Gujarat: Charotar Publishing House, India.
3. Rangwala, S.C, (2019). Building Construction. Gujarat: Charotar Publishing House, India.

**Supplementary Readings**

1. The Art of Coloring Wood: A Woodworker's Guide to Understanding Dyes and Chemicals. Authors, Brian Miller and Marci Crestani

2. Taunton's Complete Illustrated Guide to Finishing. Author, Jeff Jewitt

3. Refinishing Furniture Made Simple with DVD. Author, Jeff Jewitt

**Mapping with Programme Outcomes**

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | - | H | H | - |
| CO2 | H | H | M | M | H |
| CO3 | L | H | - | - | L |
| CO4 | H | M | M | H | H |
| CO5 | H | H | H | M | M |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:IV**  **PART:III** | **22UIDDP04**  Allied Practical – II : Furniture Design practical 2 | **CREDIT:3**  **HOURS:3/W** |

**Course Objectives**

To enable the students to

1. Understand the basic guidelines of furniture design
2. Familiarize the different types of materials used in designing furnishings
3. Planning furniture layouts for different rooms and activities using templates.
4. Making scaled model of furniture and making cutouts of furniture.
5. Preparation of records – collection of furniture for different activities, different materials, market survey of furniture.

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | **Human Factors**  Study of furniture Design involved in the design of Sofa, settee, couch, etc. Cot, bedside lockers, wardrobes Cupboards, shelves Bunk beds, study table Display | **10** |
| **Unit II** | **Principles of Design & Detailing’s**  Concepts in bedroom & living room interiors – various layout of these spaces – the use of furniture and accessories to create a certain type of ambience.   1. Form – Colour - Symbols 2. Materials & finishes – Wood, Glass, Metal, Plastics and Upholstery - include various finishes.   Fabrication Techniques involved Multiple Utility Oriented Approaches to Furniture Design | **10** |
| **Unit III** | Types of furniture – Built in furniture – Movable furniture – Systems furniture – Specially Designed furniture – Readymade furniture – Modular, Knockdown & Economy Furniture.  Traffic pattern and furniture layout for residence, commercial and office areas. | **10** |
| **Unit IV** | Introducing the techniques of planning, chiseling & jointing in timber to learn the use of hand tools. Exercise involving the design of simple furniture and making a scaled model of the furniture. | **10** |
| **Unit V** | **Projects**  Designing & detailing of   1. Residential Furniture – Seating, Sleeping, Storage & Children’s furniture 2. Commercial furniture – Showcases, Counters, Display units, Restaurant furniture, Bar furniture 3. Office furniture – Adjustable desks & storage, Mobile & Resilient chairs, Portable chairs, Movable Tables, Lounge seating. | **5** |

**Course Outcome:**

After completion of the course, the student will be able to

1. Understand the design details of a furniture and summarize the templates and proportions.
2. Analyze the materials used for construction of cabinets.
3. Understand the features of various types of furniture design.
4. Develop scaled model of furniture and make cutouts of furniture.
5. Apply art principles in furniture design

**Textbooks:**

1. Interior Design, (2016)John F. Pile, Harry N.Abrams Inc Publishers, New York
2. Interior Design Course,(2016) Mary Gilliat Coyran, Octopus Ltd., London
3. The Encyclopaedia of Funriture, Joseph Aronson, Crwon Publishers, New York
4. Interior Design & Decoration, Sherril Whiton, Prentice Hall
5. Interior Design, Francis D.K. Ching, (2017)John Wiley & Sons, New York
6. Office Furniture, Susan S.Szenasy, Facts on file Inc, New York
7. Time Saver Standards for Interior Design,(2019) Joseph De Chiara, McGraw Hill, New York.

**Supplementary Readings**

1. Interior Design, (2012) Francis D.K. Ching, John Wiley & Sons, New York
2. Jeannie Ireland (2009), History of Interior Design, air child publications, illustrated ed., Jim Postell, Furnitute Design , Wiley publishers, 2007.
3. Robbie.G. Blakemore, (2005), History of Interior Design and Furniture. From Ancient Egypt to Nineteenth – Century Europe, Wiley Publishers.

**Mapping with Programme Outcomes**

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| --- | --- | --- | --- | --- | --- |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | M | H | M | L |
| CO2 | H | M | - | - | L |
| CO3 | M | L | - | - | L |
| CO4 | H | M | M | H | H |
| CO5 | H | H | H | H | H |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:IV**  **PART:III** | **COURSE CODE:** 22UIDDN47  Non-Major Elective – II : Basics of Interior Decoration | **CREDIT:2**  **HOURS:2/W** |

**Course Objectives**

Enable the students to learn

1. Concept of Interior Design

2. Types of Design

3. Elements of Design

4. The fundamental principles of interior design.

5. Gain knowledge on career option for Interior designer

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Interior Design – Meaning and concepts. Objectives of aesthetic planning - Beauty, expressiveness, functionalism and economy. Good taste – meaning, role and importance of good taste. | **5** |
| **Unit II** | Design–Definition, meaning, purpose of design. Types - Structural design and decorative design and their characteristics. Classification of decorative design – Naturalistic design, conventional design, geometric design, abstract design, historic design, and biomorphic design. | **10** |
| **Unit III** | Elements of design **-** Line and direction, Form and Shape, Size, Colour, Light, Pattern, Texture and Space. Application of elements of design in interior and exterior. | **5** |
| **Unit IV** | Principles of design –Balance, Rhythm, Emphasis, Harmony, Proportion – meaning, and its application in the interior and exterior of houses and other commercial buildings. | **5** |
| **Unit V** | Motif - meaning. Development of design from motifs and application of motifs in interior decoration. Man, as a consumer of design. Qualities and role of a good interior designer. Career options for interior designers. | **5** |

**Course Outcomes**

* + - 1. Identify artistically appealing interiors as a designer.
      2. Create objects with good design.
      3. Apply the various elements of design in producing an interior.
      4. Apply the elements and principles knowledge to interiors.
      5. Create tastefully decorated interiors with good motifs.

**Textbooks (In API Style)**

1. Seetharaman, P and Pannu, P. (2017)Interior Design and Decoration, CBS Publishers and Distributors, New Delhi
2. Pratap R.M (2018), Interior Design Principles and Practice, Standard Publishers Distribution, Delhi.
3. Caroline cliftenet. al., (2016) The Complete Home Decorator, Portland House New York.
4. Faulkner, S. and Faulkner,R, (1987), Inside Today’s Home, Rinehart Publishing company, Newyork.

**Supplementary Readings**

* + - 1. http://ecoursesonline.iasri.res.in/course/view.php?id=213
      2. https://www.uou.ac.in/sites/default/files/slm/BHM-602CT.pdf

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | H | H | M | H |
| CO2 | H | H | H | M | H |
| CO3 | H | H | H | M | H |
| CO4 | H | H | H | M | H |
| CO5 | H | M | M | M | M |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:IV**  **PART:IV** | **COURSE CODE:** 22UIDDS48  Skill Based Subject - II: Soft Furnishings in Interiors | **CREDIT:2**  **HOURS:2/W** |

**Course Objectives**

1. Identify the types of furnishing materials

2. Classify the kinds of tools and equipment used for soft furnishing

3. Drafting design for cushion, pillow cover and other furnishings

4. Selection of furnishing materials according to areas

5. Understand the meaning of household linen and its uses

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Types of fabric used for furnishing. Selection of materials, preparation of materials before enrichment. | **5** |
| **Unit II** | Classify the different kinds of needles and threads used to make soft furnishings such as cushion cover, table cloth and rugs. | **10** |
| **Unit III** | Drafting and stitching of cushion cover, Pillow covers, table mats, curtains and rugs | **5** |
| **Unit IV** | Furnishing materials for various areas- living room furnishing, bedroom furnishing, dressing room, dining room and bathroom linen. | **5** |
| **Unit V** | House hold linen-Definition, Types of table linens -Table mats, Table Cloth, Hand Towels. Selection –use and care | **5** |

**Course Outcomes**

1. Compare and classify the soft furnishing types

2. Apply the construction methods using different kinds of needles and thread

3. Construct design for pillow, cushion, and table mats

4. Analyze the furnishing materials according different needs

5. Examine the different kinds of household linen

**Text Books (In API Style)**

**Supplementary Readings**

1. First crochet Lesley stanfield978-1-84340-612-9

2. 101 Folk embroidery and traditional handloom weaving Shailaja D. Naik

3. Shaylaja; D. Naik, Traditional Embroideries of India – APH corp, New Delhi 1996

4. Sheila paine: Embroidered Textile- Thames & Hudson Ltd. 1990

5. Usha Srikant: Ethnic Embroideries of India

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | H | M | - | L |
| CO2 | H | H | M | M | H |
| CO3 | L | M | - | - | L |
| CO4 | H | M | M | - | H |
| CO5 | H | H | - | - | L |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER: V**  **PART: III** | **COURSE CODE:** 22UIDDC51  Core Course – VI : Floriculture and Landscape designing | **CREDIT:4**  **HOURS:4/W** |

**Course Objectives:**

1. Gain knowledge on raising garden with Plants and trees of flowers and shrubs.
2. Understand the methods of gardening aspects.
3. Identify various ornamental flowers, shrubs and trees.
4. Design interior landscape with special emphasis on the choice.
5. Analyzing landscaping elements and their application in interior spaces

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Floriculture - Meaning, concept and importance. Ornamental plants - classification - annuals, biennials and perennials. Flowering and foliage shrubs, trees, climbers and creepers, cacti and succulents, ferns, palms, hardy bulbs and tender bulbs. | **10** |
| **Unit II** | Flower arrangement - importance, materials needed, steps, components of flower arrangement, basic principles, basic shapes, styles Ikebana - history, materials required, general rules and basic styles of Ikebana Dry arrangement - preservation of plant materials - foliage and flowers, prolonging the vase life of flowers, garland and other floral ornament. | **15** |
| **Unit III** | Ornamental plant protection methods - cultural, chemical and mechanical. Pest and disease control. Care and maintenance of ornamental plants. | **10** |
| **Unit IV** | Landscaping - Meaning and importance, Types of garden, garden components, garden design - formal and informal, principles of landscape gardening - Lawn - importance, preparation, methods of cultivation, use, maintenance, types of lawn. Indoor plants - potting and repotting techniques. | **15** |
| **Unit V** | Modern trends in gardening - Terrace Garden, Rock Garden, Terrarium, and Bonsai culture. Developing ornamental plants in Home garden for flats - roof garden, hanging garden. | **10** |

**Course Outcomes**

1. Do floral arrangements based on principles and elements of design.
2. Classify flowering and ornamental plants.
3. Make different types of floral arrangements.
4. Design and plan landscape garden.
5. Acquire knowledge on modern trends in gardening.

**Textbooks (In API Style)**

1. Singh,A.K and Sisodia, A, (2017), Textbook of Floriculture and Landscaping, New Delhi: New India Publishing Agency, India.
2. Griner,C, (2011), Floriculture Designing and Merchandising, New Delhi: Oxford & IBH - Publishing Company, India.
3. Kumar, N, (2010) Introduction to Horticulture, Nagarkoil: Rajalakshmi Publications, India.
4. Deshraj (2017) Floriculture at a glance, Kalyani publishers.
5. Laxmi al somani(2010) Floriculture and landscaping at a glance, Agrotech publishing.

**Supplementary Readings**

1. Horticulture books

2. Landscape books

3. <https://www.thespruce.com/landscape-design-for-beginners-2130815>

4. <http://www.aau.in/floriculture-and-landscape-architecture>

5. <https://tnau.ac.in/college-hcriperiyakulam/department-of-ft-about-department/>

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | - | H | H | - |
| CO2 | H | H | M | M | H |
| CO3 | L | H | - | - | L |
| CO4 | H | M | M | H | H |
| CO5 | H | H | H | M | M |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:V**  **PART:III** | **COURSE CODE:** 22UIDDC52  Core Course – VII: Traditional art in India | **CREDIT:3**  **HOURS:4/W** |

**Course Objectives**

1. Understand the concept of traditional interiors
2. Learn the significance of traditional housing style s of India
3. Examine the various art forms and paintings of Indian tradition
4. Identify the traditional textiles of India
5. Classify the traditional arts and crafts of various states

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Introduction to Theme, Difference between Interior Design Theme and Interior Design Concept, Benefits of an Interior Design Theme, Key elements of Interior Design the, Principles of Interior Design Theme: Form, Light Color, space, Texture and pattern. | **10** |
| **Unit II** | Different Types of Themes for Interior Design; Traditional, Mid-Century Modern; Modern. Traditional housing styles of India: Kutcha, Pucca, chettinad house,Tharavad, Bhungas, haveli. | **15** |
| **Unit III** | Traditional Paintings and arts of India: Madhubani, pattachitra, miniature, phad, gond, tanjore, kalamkari , cheriyal scrolls. | **10** |
| **Unit IV** | Traditional textiles of India  a. Dyed and printed textiles of India, Kalamkari (painted and block printed),Patola, tie and dye of Gujarat and Rajasthan, Ikats of Orissa Pochampally of Andhra Pradesh  b. Woven textiles of India  Brocades of Uttar Pradesh, Society India,Shawls of Kashmir  c. Embroideries of India, Chikankari of Uttar Pradesh,Kasuti of Karnataka, Pulkari of Punjab, Kashida of Kashmir | **15** |
| **Unit V** | Traditional arts and crafts of various states of India including – Tamilnadu, Karnataka, Kerala, Andhra Pradesh, Goa, Rajasthan, Gujarat, Kutch, Uttar Pradesh, West Bengal, Orissa, Bihar, Jammu and Kashmir. | **15** |

**Course Outcomes**

1. Recalling the significance of traditional interiors
2. Classify and compare the housing styles of India
3. Experiment the various art forms in modern housing style
4. Classify the traditional textiles of India
5. Create new art forms with application of traditional arts and crafts.

**Text Books (In API Style)**

1. Asher, F.M. (2003), “Art of India – Prehistory to the Present”, Encyclopedia Britannica Inc
2. Edith tomory (2018) Hisory of fine arts in the east and west, tata mc graw hill publishers
3. Campbell, G. (2006), “The Grove Encyclopedia of Decorative Arts”, New York: Oxford University Press.
4. [Jasleen Dhamija](https://www.goodreads.com/author/show/1586564.Jasleen_Dhamija), (2015)Indian Folk Arts and Craft National book trust
5. M L Nigam(2012) History of art , Saradha Publishing house
6. Somnath chakravathy (2018), early rock art and tribal art

**Supplementary Readings**

1. https://www.thebetterindia.com/53993/10-indian-folk-art-forms-survived-paintings/

2. https://leverageedu.com/blog/traditional-art-forms-of-india/

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | - | H | S | H |
| CO2 | - | H | M | M | M |
| CO3 | M | H | H | H | L |
| CO4 | M | M | L | L | M |
| CO5 | H | - | H | H | H |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:V**  **PART:III** | **COURSE CODE:** 22UIDDC53  Core Course – VIII : Ergonomics | **CREDIT:4**  **HOURS:4/W** |

**Course Objectives**

The student will be able to

1. Use the concept of ergonomics design

2. Applying proper posture to avoid health issues.

3. Analysing anthropometry dimensions of Human body.

4. Outline the problems in the musculoskeletal system and describe prevention method.

5. Apply the appropriate noise reduction materials.

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Concept of ergonomics - Definition, characteristics, importance, factors involved - worker, workplace, tools and equipment, environment, climate. Design of workplace - Activity analysis, Designing work areas based on ergonomic principles. | **10** |
| **Unit II** | Musculoskeletal Disorder (MSD) - Kyphosis, Lordosis, Scoliosis, strain, tendinitis, joints, ligaments. Carpel Tunnel Syndrome, Back, neck, knee problem. Stress - Definition, types, and coping techniques. | **10** |
| **Unit III** | Anthropometry - Definition, types - Static and Dynamic dimensions. Anthropometric dimension of workers at work and at rest, normal and maximum vertical and horizontal reaches, work heights when seated and standing, worker in relationship with workspace and activities. | **15** |
| **Unit IV** | Improving work efficiency - Concept of efficiency, principles and techniques of work simplification, effective use of body mechanics, Posture involved in different activities - sitting, standing, lying down, change of posture, Movement - lifting, pulling and pushing, problems of posture - squatting and cross-legged problems. Exercises for kyphosis, lordosis, scoliosis postural problems. | **15** |
| **Unit V** | Environmental factors - Noise - Noise guidelines, noise reduction materials. Temperature - Heat stress, Heat strain, Materials used for thermal comfort, Heat exchange - conduction, convection, radiation. | **10** |

**Course Outcome:**

After completion of the course, the student will be able to

1. Distinguish the terms ergonomics and anthropometry.
2. Relate significance of anthropometry to workplace design.
3. Identify Anthropometric dimension of workers at work and at rest.
4. Comprehend interrelationship of posture and work on productivity.
5. Adhere to safety principles during work performance.

**Textbooks (In API Style)**

1. Lakhwinder Pal singh(2018) work study and ergonomics, cambride university press
2. Prabhir mukpodhay(2019) ergonomics for the layman application design, CRC press
3. Jeffrey anshel(2019) Visual ergonomics, CRC press.
4. Phillips, C.A,(2000),‘Human Factors Engineering*’*,New York: John Wiley and Sons, Inc., USA.
5. ILO,(2001) ‘Introduction to work study’, New Delhi: Oxford & IBH publishing Co. Ltd., India.
6. Hughes P and Ferrett E., (2009), ‘Introduction to Health and Safety at Work’, Oxford, Elsevier Science.
7. Stranks J., (2006), ‘Safety at Work’, Key terms, Oxford, Elsevier Science.

**Supplementary Readings**

* + - 1. [**https://ehs.unc.edu/workplace-safety/ergonomics/#:~:text=What%20is%20Ergonomics%3F,of%20injury%20due%20to%20work**](https://ehs.unc.edu/workplace-safety/ergonomics/#:~:text=What%20is%20Ergonomics%3F,of%20injury%20due%20to%20work)**.**
      2. **https://www.osha.gov/ergonomics**

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | - | L | M | H | M |
| CO2 | - | - | L | M | L |
| CO3 | - | L | H | H | M |
| CO4 | M | M | M | L | L |
| CO5 | L | L | M | M | M |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER: V**  **PART: III** | **COURSE CODE:** 22UIDDC54  Core Course – IX: Resource Management | **CREDIT:4**  **HOURS:4/W** |

**Course Objectives**

1. Understand the importance of management in family and family resources
2. Apply the principles in the management process.
3. Recognize the resources available in a family setting.
4. Develop the skills in utilizing the available resources in the residence programme.
5. Simplify work in an efficient manner.

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Meaning and definition of home management. Micro and Macro Environment: Management process – Planning: Types and importance of the plan - Controlling - Adjusting, supervising checking and Evaluation - types of evaluation – Absolute and Relative. | **10** |
| **Unit II** | Decision making: Process of decision making, types of decisions, methods of resolving conflicts, Resources – Definition, meaning, classification of resources. | **10** |
| **Unit III** | Values, goals, standards in relation to the management process. Time – Time plan, steps in making time plans, tools in time management, time norm, work unit/workload, peak load, work curves, rest periods, time schedules. Time management process – planning, controlling, and evaluating. | **10** |
| **Unit IV** | Work simplification: Definition, importance, techniques – process chart, operation chart, Mundel’s classes of changes. Energy: Energy requirements for household activities, planning, controlling, and evaluating energy management Concept of fatigue, types of fatigue, avoidance of fatigue | **15** |
| **Unit V** | Money: Definition of family income, types, family budget – definition, importance, types, steps in making budget, factors affecting the budget, advantages of budgeting. Account keeping importance, types of account systems, methods of handling money. | **15** |

**Course Outcomes**

1. Gain knowledge in family resources

2. Understand the effective planning

3. Efficient in taking appropriate decision

4. Importance of time planning

5. Learns to handle money

**Textbooks (In API Style)**

Deepak Kumar ; Prabhakar. P.K Balda, Shanti ; Verma (2015) Objective of home Science at a glance, competition tutor

Anju Chauhan(2017) Comprehensive textbook of home science, laxmi publication

* + - 1. Nickell, P and Dorsey (1978). Management in Family Living. New Delhi: John Wiley and Sons.
      2. Michael Solomon (2020). Consumer Behavior, Jaipur, pearson education.

1. Nair, S.R. (2002). Consumer Behavior in Indian perspective, Mumbai, Himalaya publishing house.
2. Deacon, E. and Firebaugh, F.M (1998). Family resource management, Principles, and management publishing.
3. Shrimati anjupatni(2018) home management, chaukambhika aruntaliya.
4. Education Planning group. (2011) Home Management. New Delhi: Arya Publishing House

**Supplementary Readings**

* + - 1. [**http://ecoursesonline.iasri.res.in/course/view.php?id=218**](http://ecoursesonline.iasri.res.in/course/view.php?id=218)
      2. [**http://ecoursesonline.iasri.res.in/mod/page/view.php?id=27931**](http://ecoursesonline.iasri.res.in/mod/page/view.php?id=27931)

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | M | L | H | H | H |
| CO2 | M | M | H | H | H |
| CO3 | - | M | H | - | - |
| CO4 | M | M | H | L | L |
| CO5 | L | M | M | - | - |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER: V**  **PART: III** | **COURSE CODE:** 22UIDDP55  Core Practical – III: Draftsmanship - 1 | **CREDIT: -**  **HOURS: 3/W** |

**Course Objectives**

1. Understand the importance of draftsmanship
2. Develop skill in using different drafting tools.
3. Learn to use various lines, to develop a drawing.
4. Understanding the concept of Dimensioning
5. Understand the importance of free hand sketching.

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Introduction to Draftsmanship. Drawing office organization, layout of drawing studio. Need for training, Duties of a draftsman. Determining needs and wishes of the client. Relationship between two dimensional and three dimensional diagrams. | **5** |
| **Unit II** | Drafting tools and Techniques - Drawing table and Boards, Introduction, How to handle Handling paper and pencil, Types of scales, Tools for curves and irregular forms - Drawing aids. Drafting mediums - Tracing paper, tracing cloth, water color paper, sketch paper, vellum, polyester film. | **10** |
| **Unit III** | Lines - types of lines, thickness of lines, hatching of section. Lettering - requirements of good lettering, size of letters and numerals space between letters, recommended height of letters, lettering technique. | **10** |
| **Unit IV** | Dimensioning - general principles, precaution in dimensioning, method of placing dimensions, unit of dimensioning, method of executing dimension, arrow heads. | **10** |
| **Unit V** | Geometrical constructions Technical sketching - introduction - importance of freehand sketching, principles of free hand sketching | **10** |

**Course Outcomes**

1. Understand the importance of Draftsmanship
2. Get the knowledge on various drafting tools and their uses.
3. Create drawings using different types of lines
4. Understand the concept of dimensioning and their methods of execution.
5. Know the importance of freehand sketching and technical sketching.

**Textbooks (In API Style)**

1. Birdie. G.S and Birdie.J.S (2013), Civil Draughtsmanship, Theory and Practice. DhanpatRai Publishing company (P) Ltd., New Delhi
2. Natrarajan.K.V (1994), A Text book of Engineering Drawing, self - publication, Chennai
3. [M.V. Chitawadagi S.S. Bhavikatt](https://www.amazon.in/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=M.V.+Chitawadagi+S.S.+Bhavikatti&search-alias=stripbooks)i(2019) builduing planning and draweing, dream tech press
4. Lal.R and Rana.R ., (2015),A Textbook of Engineering Drawing: Along with an introduction to AutoCAD® 2015, New Delhi: IK International Publishing House
5. Natarajan K. V, (2016), A Text Book of Engineering Graphics, Chennai : Dhanalakshmi Publishers, India.

**Supplementary Readings**

1. [Oscar SchutteTeale](https://www.amazon.in/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=Oscar+Schutte+Teale&search-alias=stripbooks)(2009), How To Do Architectural Drawing - A Text Book And Practical Guide For Students In Architectural Draftsmanship Paperback - Import.

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | - | H | M | H | M |
| CO2 | H | H | M | - | M |
| CO3 | - | M | - | H | M |
| CO4 | M | H | M | H | - |
| CO5 | M | M | H | H | H |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:V**  **PART:III** | **COURSE CODE:** 22UIDDP56  Core Practical – IV: CAD Practical -1 | **CREDIT:-**  **HOURS:3/W** |

**Course Objectives**

* + - 1. Learn the basic concepts of the AutoCAD Software.
      2. Learn to draw different types of lines by using AutoCAD commands.
      3. Learn to draw simple floor plan using AutoCAD commands.
      4. Understand the use of 3D modelling.
      5. Develop the ability to construct accurate 2D geometry and complex 3D shapes

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Introduction to Auto CAD - Auto CAD system requirements, AutoCAD GUI-Title bar, Menu bar, toolbar, UCS, Layout tab, Command Entry, Status bar, Task bar General commands - New, open, save, save as, close, exit - Point fixing methods-line using absolute co-ordinate system, relative rectangular co-ordinate system and relative polar co-ordinate system, circle, arc, ellipse, rectangle, polygon. | **10** |
| **Unit II** | Modification tools-Erase, copy, move, scale, rotate, trim, extend, array, offset, mirror, break, stretch - Inquiry tools - ID, DIST, AREA, LIST, Hatching, poly line, ploy line edit, spline - spline edit, multiline, multiline edit. | **10** |
| **Unit III** | Drafting settings, function keys, text, text style, text edit, multi text, colour, line type, line weight, zoom, pan, view, solid, donut, fillet, chamfer, layering concept - Dimensions - Linear, align, angular, radius, diameter, baseline, continue, leader - Dimension edit, Dimension styles-lines and arrows tab, fit tab, primary units, alternate units, Tolerances - Layout of drawing sheets and title block. | **10** |
| **Unit IV** | Introduction to 3D Modeling - point fixing method - absolute co-ordinate systems, relative cylindrical and relative spherical co-ordinate systems. | **5** |
| **Unit V** | Types of model - wire frame model, surface model and solid models - Standard primitive tools - Box, cone, wedge, torus, cylinder, sphere. Boolean operation - union, subtract, Intersect, Interference, Extrude, Revolve. | **10** |

**Course Outcomes**

1. Understand the basic concepts and Commands in AutoCAD
2. Create different objects using modification tools.
3. Create floor plan using different drafting commands.
4. Understand the 3D modelling concepts and tools.
5. Get knowledge on rendering tools.

**Text Books (In API Style**)

1. Teach Yourself Auto CAD, (2008)GIBBS, BPE Publication New Delhi.
2. Azhar wahab(2020), a handbook on AutoCAD tools practice, Notion press.
3. Omura, G. 2005, Mastering Auto CAD 2011 and Auto CAD LT , BPB Publications, New Delhi.

**Supplementary Readings**

1. TenLinks Daily
2. CADdigest
3. Inside Outside

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | H | L | L | M |
| CO2 | H | M | - | - | H |
| CO3 | H | - | M | H | - |
| CO4 | M | M | M | M | M |
| CO5 | M | L | - | M | H |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER: V**  **PART: III** | **COURSE CODE:** 22UIDDE58  Internal Elective – III: Building services | **CREDIT:3**  **HOURS:4/W** |

**Course Objectives**

* 1. Imbibe the knowledge on mechanical services in buildings.
  2. Expose selves to ideas, issues and concepts of sustainable architecture.
  3. Understand the implications of energy in building design.
  4. Study about essential electrical and plumbing services.
  5. Gain knowledge on ICT networking.

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Plumbing services – Need, Purpose, and general guidelines in designing plumbing system. Types of pipes – Wastewater pipe, Soil pipe and vent pipe. Traps – requirements and types. Sanitary apparatus – Wash basin, Sink, Bathtub, Urinal, Water closet and Flushing cistern. Methods of plumbing system – one pipe system and two pipe system. | **15** |
| **Unit II** | Energy generation, distribution, supply, emergency power distribution, UPS, computers and communication networks, power storage, power for building operational equipment like food service, waste disposal, launderette, entertainment equipment, fuel gas piping. | **10** |
| **Unit III** | Ventilation system – Definition, need and purpose. Types - Natural ventilation – general rules followed in natural ventilation, Mechanical ventilation – Air Conditioning system – Components, working principle and types. Function of HVAC and AHU. | **10** |
| **Unit IV** | Mechanical services – Lifts and Escalators – Parts, working principle and types. Building Bye laws - Definition, Purpose, and Technical terms – Carpet area, Built up area, set back, FSI. Requirements for Entry/Exit, Staircase, Open space, Building height and different rooms of a building. | **10** |
| **Unit V** | ICT networking – data-based systems public address systems, paging, and external communication systems, cable TV, data networks and voice networks, auxiliary systems – telephone and tele-communication, basic and special features. | **15** |

**Course Outcomes**

1. Have a thorough knowledge on building services
2. Critically analyse various safety and security systems in buildings
3. Differentiate systems like mechanical, electric and electronic systems
4. Appraise role of communication systems in modern interiors
5. Comprehend human sensory devices used in interiors

# Textbooks:

1. Kasu, (2018), ‘Interior Design’, Mumbai: Ashish Book Center, India.
2. Miller and Miller (2013), ‘Complete Building Construction’, London: Wiley-dream tech India Pvt Ltd, UK.
3. Chadderton (2012), building services engineering, taylor francis group

# Reference books:

1. IS codes and NBC publications
2. BIS special publications
3. Grondzik, Kwok, Stein and Reynolds, (2002), ‘Mechanical and electrical equipment for buildings’, (11th Ed)

**Supplementary Readings**

1. Inside Outside

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | M | L | M | L | M |
| CO2 | M | M | H | - | H |
| CO3 | L | M | H | L | M |
| CO4 | M | L | H | L | - |
| CO5 | M | H | M | L | - |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER: V**  **PART:IV** | **COURSE CODE:** 22UIDDS59  Skill Based Subject - III: Sketchup | **CREDIT:2**  **HOURS:2/W** |

**Course Objectives**

1. Understand the application of Google Sketchup in the design field

2. Understand the system requirements for installing the software

3. Analyze the tools available in the software

4. Analyze the material library

5. Understand the rendering process in Google Sketchup

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Need & purpose of 3D models and views in the design field.  Advantages of Google Sketchup in the design field | **5** |
| **Unit II** | Screen components of Google sketch up  System requirements to install the software  Navigation Tools – Zoom, Pan, Orbit | **5** |
| **Unit III** | Draw Tools – Line, Pencil, Select, Rectangle, Circle, Move, Copy, Rotate, Offset  Modeling tools – Push pull, Follow me and intersecting geometry | **10** |
| **Unit IV** | Features of material library and types of materials available in the material library. Introducing paint bucket, material editor, texture and bitmaps. | **5** |
| **Unit V** | Light and Camera settings for rendered views. Creating scenes and new styles saving it. | **5** |

**Course Outcomes**

1. Outline the importance of 3D views in design spaces.
2. Interpret the user interface of Google Sketch up software.
3. Examine the uses of tools available for creating 3D models
4. Identify different materials and finishes available
5. Evaluate the light and camera settings for 3D views

**Text Books (In API Style)**

# [Aidan Chopra](https://www.amazon.in/Aidan-Chopra/e/B001JSJIS2/ref=dp_byline_cont_book_1), SketchUp 2014 For Dummies, John Wiley & Sons

# [Daniel Tal](https://www.amazon.in/Daniel-Tal/e/B0029CQZXS/ref=dp_byline_cont_book_1), Rendering in SketchUp: (2013)From Modeling to Presentation for Architecture, Landscape Architecture, and Interior Design, Wiley Publishers.

# [Alexander C. Schreyer](https://www.amazon.in/s/ref=dp_byline_sr_ebooks_1?ie=UTF8&field-author=Alexander+C.+Schreyer&text=Alexander+C.+Schreyer&sort=relevancerank&search-alias=digital-text), Architectural Design with SketchUp: (2015)3D Modeling, Extensions, BIM, Rendering, Making, and Scripting 2nd Edition, Wiley Publishers

**Supplementary Readings**

1. John G. Brock, SketchUp for Builders: A Comprehensive Guide for Creating 3D Building Models Using SketchUp, Wiley Publishers
2. [Lydia Cline](https://www.amazon.in/s/ref=dp_byline_sr_ebooks_1?ie=UTF8&field-author=Lydia+Cline&text=Lydia+Cline&sort=relevancerank&search-alias=digital-text) , SketchUp for Interior Design: 3D Visualizing, Designing, and Space Planning, Wiley Publishers.

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | M | L | M | L | H |
| CO2 | M | M | H | M | H |
| CO3 | L | M | H | H | M |
| CO4 | - | L | H | L | H |
| CO5 | M | H | M | - | H |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:VI**  **PART:III** | **COURSE CODE:** 22UIDDC61  Core Course – X : Graphic Design | **CREDIT:4**  **HOURS:5/W** |

**Course Objectives**

* + - 1. Awareness of media &
      2. Knowledge on graphic processes for students to function in any publishing house.
      3. To provide theoretical and practical knowledge of basic design processes of communication on any publishing process.
      4. Study about advertising and its importance in modern life.
      5. Understand about photography process

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Meaning of Communication - Definition, Characteristics, Elements and types of communication. Mode of communication - Books, Newspapers, Film, Cinema, Radio and Television, mobile phones and internet. | **10** |
| **Unit II** | Communication Process, audio-visual aids, Mass media production, Barriers in Communication – Definition, types and overcoming the barrier of communication. Tools of communication. Advantages of effective communication. | **15** |
| **Unit III** | Graphic Design – Introduction, Role of design in society – Impact and function of design, Printing / publishing technology, Types - Booklets, Brochures, Folders, Posters. Role of design in the changing social scenario. Role and responsibility of Designers. | **15** |
| **Unit IV** | Advertising – Definition, Advantages and disadvantages, Role of a advertising in modern life - Advertising appeals, Advertising through Print Media, Outdoor Advertising. Evolution of logos | **10** |
| **Unit V** | Photography –Definition, Photographic processes - A basic Understanding. Camera - Functions and uses. Calligraphy and Typography - various aspects. | **10** |

**Course Outcomes**

1. Understand the meaning, characteristics, elements and mode of communication
2. Discuss the Impact and functions of Graphic design.
3. Identify the Role of advertisement in modern society.
4. Experiment the photographic process and thereby learning the basics in photography

**Text Books (In API Style**)

Dahana O.P. and Bhatnagar, (1980). Education and Communication for Development, Oxford & IBM Publishing Co. New Delhi.

Kanel Kumar,(2020) Mass Communication, jaico publishing house

Mehta, (2011)Mass Communication, Allied pubishers limited

* + - 1. Effort silver(2022)Best Logos, PrintsKindle edition
      2. Uma Narula,(2012) Mass Communication - Theory & Practice.

**Supplementary Readings**

<http://www.rapodar.ac.in/pdf/elearn/Mass%20com%20Sem%20III%20%20notes.pdf>

tudocu.com/in/document/birla-institute-of-technology-and-science-pilani/introduction-to-mass-communication/mass-communication-notes/20070281

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | M | L | H | H | L |
| CO2 | H | M | H | H | L |
| CO3 | H | L | H | - | M |
| CO4 | H | M | H | - | H |
| CO5 | M | L | M | M | M |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:VI**  **PART:III** | **COURSE CODE:** 22UIDDC62  Core Course – XI : Visual Merchandizing | **CREDIT:3**  **HOURS:5/W** |

**Course Objectives**

1. Understand the concept of commercial art and merchandising

2. Learn the principles of merchandising

3. Understand visual and display merchandising

4. Classify the types of display

5. Analyse the trend factors in mechandising

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| **S. No.** | **CONTENT** | **No of hours** |
| **Unit I** | Concept of commercial art and merchandising – Meaning, classification, development – recent trends –art, architecture and display. | **10** |
| **Unit II** | Merchandise Presentation **-** Meaning, Principles of Merchandise Presentation, Categories in Merchandise Presentation, Dominance Factor in Merchandise Presentation, Cross Merchandising. | **15** |
| **Unit III** | Basics of Display, Design Basics, Principles of Design, Signage, Understanding Materials, the Purpose of Planning Fixtures, Types of Fixtures. Colour Blocking &Colour Psychology - Interiors & Exteriors | **15** |
| **Unit IV** | Types of display- Window Display—Meaning and Scope, Vis-à-vis Merchandise, Types of Setting, Promotional Display Vs. Institutional Display, Window Display—Construction. Art principles in arrangement of display. | **10** |
| **Unit V** | Trend analysis & Forecasting- Styling, Display Calendar, Sales Tracking, Handling the Props, Lighting, Organizing an In-store Event, Quality and Process in Visual Merchandising, Standard Operating Procedures (SOPs). | **10** |

**Course Outcomes**

1. Recalling the commercial art and merchandising methods

2. Eliciting the principles of merchandising

3. Apply the principles of design in merchandising

4. Compare and classify the types of display

5. Judge the recent trends in market and making over of visual merchandising

**Text Books (In API Style)**

1. Wells, W. D, Moriarty, S and Burnett,J (2005), “Advertising: Principles and Practice” (7th Edition), Prentice Hall Publishers
2. Kazmi, S. H. H and Batra, S. K (2008), “Advertising and Sales Promotion”, New Delhi : Excel Books, India.
3. Morgan, T. (2010) “Window Display: New Visual Merchandising”,. Laurence King Publishing.
4. Fernie, J, Fernie, S, Moore, C and Fernie, A. (2014)“Principles of Retailing”, Routledge, (Taylor and Francis Group),
5. Barry Berman & Joel R Evans (2006). Retail Management: A Strategic Approach, Pearson.
6. Levy, Michale & Barton A. Weitz (2009). Retailing Management. Tata Mc Graw Hill. Pradhan Swapana (2009). Retailing Management. Tata Mc Graw Hill.
7. Swati Bhalla and Anurag S (2010). Visual Merchandising. Tata Mc Graw Hill

**Supplementary Readings**

1. Pattanchetti, C.C., Reddy. P.N., (1995), Marketing, Rainbow publisher, Coimbatore.

2. Nair, R. (1994), Marketing, Sultan chand and sons educational publishers, New Delhi.

3. Nisra, M.N. (1994), Sales promotion and advertising management, Himalaya publishing house, Bombay.

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | L | M | L | - |
| CO2 | - | L | L | M | H |
| CO3 | H | M | L | L | M |
| CO4 | H | H | M | - | H |
| CO5 | M | M | L | - | M |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:VI**  **PART:III** | **COURSE CODE:** 22UIDDC63  Core Course – XII : Kitchen Design | **CREDIT:4**  **HOURS:5/W** |

**Course Objectives**

Gained knowledge of different materials used for various surfaces in kitchen.

Developed skill in planning different layouts.

Understand about kitchen work height and space dimension

Learn about essential services required in the kitchen

studies about maintenance of kitchen

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Kitchen planning – Functions performed in a kitchen, types of kitchen, principles of planning kitchen – orientation and location, ventilation, storage needs, work triangle, colour, light and safety. | **15** |
| **Unit II** | Kitchen geometry – 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. | **10** |
| **Unit III** | Materials and finishes – Various materials and finishes used in kitchen – floor, walls, sink, ceiling, platforms, storage and their characteristics | **10** |
| **Unit IV** | Essential services needed in a kitchen. Water supply – hot and cold, taping, water purifiers. - Electricity services – electric current, exhaust fans, electrical equipment and their locations.  - Drainage services – Wastewater drainage system, waste disposal. | **15** |
| **Unit V** | Kitchen storage – principles of kitchen storage, storage areas in kitchen and its dimensions, hand operated tools and their location. Care and maintenance of storage. | **10** |

**Course Outcomes**

1. Summarize the functions performing in Kitchen and need of work triangle.
2. Draw and Apply the Principles of planning and standards in Kitchen design.
3. Examine the Material and finishes of kitchen well suited for performance.
4. Interpret the Current trends in modular kitchen.
5. Create a Design for storage spaces and their requirements for kitchen

**Text Books (In API Style)**

* + - 1. Gopal Dwivedi(2020), Modular kitchen planning and guide,Notion press
      2. Chris Morris(2019) kitchen design ideas, Kindle edition
      3. Vinny lee and James merell(2005) kitchens a Design source book, Ryland peters and small

**Supplementary Readings**

<http://ecoursesonline.iasri.res.in/mod/page/view.php?id=618>

https://www.ihmnotessite.net/kitchen-layout-and-design

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | H | H | H | H |
| CO2 | M | - | H | - | H |
| CO3 | M | L | M | M | M |
| CO4 | H | M | - | M | - |
| CO5 | M | - | H | H | H |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER: VI**  **PART: III** | **COURSE CODE:** 22UIDDP64  Core Practical – III Draftsmanship - 2 | **CREDIT:4**  **HOURS:5/W** |

**Course Objectives**

1. Learn the different views of an object.
2. Understand the importance of symbols in drawings.
3. Develop skill to make various projections
4. Learn about the basics of Plumbing and Electrical Installations.
5. Learn the Concept of Perspective View

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Symbols - Meaning, importance; Types of symbols used in drawings - Architectural symbols, structural symbols, door symbols, window symbols | **10** |
| **Unit II** | Plumbing -Water supply - In residential building, multi-storied buildings. Sanitation - traps, waste water disposal - inspection chamber, septic tank and ventilation systems, sanitary fixtures and fittings, plumbing systems. Plumbing practice - plumbing symbols and drainage plan. House wiring - electrical symbols in wiring plan, residence wiring diagram, planning of electrical installation of a building | **15** |
| **Unit III** | Orthographic projection - meaning, theory of orthographic projection, Quadrants in orthographic projection, multi view orthographic projection, method of drawing section. | **10** |
| **Unit IV** | Isometric view - need for study, pictorial drawings, isometric projection - definition, principles, characteristics, isometric view and isometric projection. | **15** |
| **Unit V** | Perspective view - theory of perspective projection, technical terms in relation with perspective, classification of perspective, methods - one point perspective and two point perspective. Rendering Techniques - Tools used in rendering- pencil, eraser, short-bristled stipple brush, mechanical lines. Different textures, materials used in buildings, floor finishes, shadows. | **10** |

**Course Outcomes**

1. Understand the importance of symbols and their uses.
2. Get the knowledge on plumbing, plumbing fixtures and fittings and Basics of Electrical Installations.
3. Create drawings using Orthographic Projections.
4. Draft Isometric Projections.
5. Draft Perspective Projections.

**Text Books (In API Style)**

1. Pratap. R.M. (2018), Interior Design, Principles and Practice, Standard Publishers distribution,Delhi.
2. Natrarajan. K.V. (2004), A Text book of Engineering drawing self - publication, Chennai.
3. Birdie. G.S and Birdie. J.S. (2013), Civil Draughtsmanship, Theory and Practice. DhanpatRai publishing company (P) Ltd., NewDelhi
4. Venugopal. K. (2004), Engineering Graphics, 5th edition, New Age International Publishers, NewDelhi.
5. Lal.R and Rana.R ., (2015),A Textbook of Engineering Drawing: Along with an introduction to AutoCAD® 2015, New Delhi: IK International Publishing House
6. Natarajan K. V, (2006), A Text Book of Engineering Graphics, Chennai : Dhanalakshmi Publishers, India.

**Supplementary Readings**

1. [Oscar SchutteTeale](https://www.amazon.in/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=Oscar+Schutte+Teale&search-alias=stripbooks)(2009), How To Do Architectural Drawing - A Text Book And Practical Guide For Students In Architectural Draftsmanship Paperback - Import.

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | L | M | L | H |
| CO2 | H | L | L | M | H |
| CO3 | H | M | L | L | M |
| CO4 | H | H | M | - | H |
| CO5 | M | M | L | - | M |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:VI**  **PART:III** | **COURSE CODE:** 22UIDDP65  Core Practical – IV: CAD Practical - 2 | **CREDIT:4**  **HOURS:4/W** |

**Course Objectives**

1. Understand the basics of 3D modeling.
2. Get familiarized with the tools used to create 3D objects.
3. Acquire practical knowledge in 2D to 3D conversion.
4. Analyse Rendering and Special Effect
5. Gain an understanding on other software available for 3D modeling

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Introduction to 3D modeling - point fixing method - Absolute co-ordinate systems, relative cylindrical and relative spherical co-ordinate systems. Types of models - wire frame model, surface model and solid model. | **10** |
| **Unit II** | Standard primitive tools - Box, cone, wedge, torus, cylinder, sphere - Boolean operations - union, subtract, intersect, interference | **15** |
| **Unit III** | 2D to 3D conversion - Extrude, revolve. Lighting - point light, spot light, direct light. Camera - free and target camera. | **15** |
| **Unit IV** | Rendering and special effects - Materials, Rendering still images, rendering animations, changing background colour and adding background images. Data exchange - import and export of models. | **15** |
| **Unit V** | Other software available for 3D Rendering – 3Ds Max, V ray etc | **5** |

**Course Outcomes**

The student will be able to

1. Learn about 3D modeling.
2. Identify the standard primitive tools.
3. Know the conversion of 2D models to 3D models.
4. Understand about rendering in 3D modeling.
5. Get a knowledge on the other software available for 3D rendering.

**Text Books (In API Style**)

1. Teach Yourself Auto CAD, GIBBS, BPE Publication New Delhi.
2. Inside Auto CAD.
3. Omura, G. 2005, Mastering Auto CAD 2005 and Auto CAD LT 2005, BPB Publications

**Supplementary Readings**

1. TenLinks Daily
2. CADdigest
3. Inside Outside

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | L | H | H | L | M |
| CO2 | M | H | H | L | L |
| CO3 | L | H | - | M | - |
| CO4 | M | H | - | H | M |
| CO5 | L | M | M | M | L |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER:VI**  **PART:III** | **COURSE CODE:** 22UIDDE66  Internal Elective – IV: Estimation Costing and Specification | **CREDIT:3**  **HOURS:4/W** |

**Course Objectives**

1. Understand the concept of estimation of interiors

2. Analyze the method of preparation in labour estimation

3. Assess the detailed estimate of interior furnishing and finishing

4. Consider the rate of materials used in interiors

5. Identify the requirements of polishing materials

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Estimation – definition, purpose, types of estimate, and procedure for Estimating the cost of work in order to implement an interior design project or to make products related to interior design like furniture, artifacts | **10** |
| **Unit II** | Rate Analysis – definition, method of preparation, quantity & labour estimate for woodwork, steelwork, Aluminum work, glass & its rate for different, thickness & sections, finishing (enamel paint, duco paints, melamine, DU coats, Hand polishing, veneering and laminating) for walls & ceilings. | **15** |
| **Unit III** | Detailed Estimate – data required, factors to be considered, methodology of preparation, abstract of Estimate, contingencies, labour charges, bill of quantities, different methods of estimate for interior design works, methods of measurement of works. | **15** |
| **Unit IV** | Cost of the following items: electrical fitting like, luminaries, fan, cables, switches etc., tiles in skirting & dado, cement plaster, joinery in wood, steel & aluminum, painting to walls – cement paint, oil paints , distemper acrylic emulsion, enamel paint painting to joinery, varnishing, | **10** |
| **Unit V** | French polishing plumbing equipments like piping, shower panels, cubicles, tubs, Jacuzzis, taps, motors, fountains, false ceiling of 25 aluminum panels, steel & wooden frame work, thermocol. wall paneling of ceramic tiles & other tiles of materials suitable for the same, partitions made of materials like aluminum wood, steel | **10** |

**Course Outcomes**

1. Examine the Estimate of the materials used in finishing

2. Analyze the rate of different materials used in interiors

3. Prepare a detailed estimate cost of interiors

4. Assess the cost of electrical equipment and create a report for the materials

5. Compare and judge the polishing and others materials favors the budget of the client

**Text Books (In API Style)**

1. B N Dutta (2013)Estimation costing in civil engineering, UBS publisher

2. S C kohli (2002)a textbook of estimate and costing, s c chand publishers

3. Rangwala, (2016)water supply and sanitation, Hinmalaya publishing.

4. Arulmanickam A.P. and T.K. Palaniappan (1993), Estimating and Costing, Pratheeba Publishers, Coimbatore.

5. Dutta, B.N., (2012)“Estimating and Costing in Civil Engineering”, UBS Publishers & Distributors Pvt. Ltd., 2003 2. K

6. Kohli, D.D and Kohli, R.C., “A Text Book of Estimating and Costing (Civil)”, S.Chand & Company Ltd., 2004

**Supplementary Readings**

1. Quotations of various companies

2. Catalogues of various companies

Mapping with Programme Outcomes

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| --- | --- | --- | --- | --- | --- |
| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | L | H | M | H | M |
| CO2 | M | H | L | M | L |
| CO3 | L | - | M | - | L |
| CO4 | - | H | H | H | M |
| CO5 | - | M | L | M | L |

PO – Programme Outcome, CO – Course outcome

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| **SEMESTER: VI**  **PART: IV** | **COURSE CODE:** 22UIDDS68  Skill Based Subject - IV: Professional Practice | **CREDIT:2**  **HOURS: 2** |

**Course Objectives**

1. Define Professional Practice and its purpose in Interior Design

2. Understand the client relationship in a design project

3. Inspect the cost of materials and construction methods for a project

4. Analyse the process involved in project management

5. Design design portfolio

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| **S. No** | **CONTENT** | **No of hours** |
| **Unit I** | Definition, concept and need of studying professional practice in Interior Design. Ethical standards and professional ethics to be followed in the design field. | **5** |
| **Unit II** | Understanding the clients’ needs, their demographics details and decision making process. Study the scope of the project, budget of the client and their design preferences. | **5** |
| **Unit III** | Field visits to shops, manufacturers and traders to identify the materials available, its cost, estimation regarding interior works like carpentry, paneling etc and thereby preparing the budget for the project | **5** |
| **Unit IV** | Definition of project management process and the role of designers.  Phases of Interior Design project | **5** |
| **Unit V** | Preparing a design portfolio for job search | **10** |

**Course Outcomes**

1. Describe the need and purpose of professional practice in Interior Design field
2. Analyse the client needs, their budget and design preferences in a project
3. Examine the process of Project management
4. Evaluate the cost required for materials and construction work and thereby creating a budget for a project
5. Creating design portfolio

**Text Books (In API Style)**

1. [Christine M. Piotrowski](https://www.wiley.com/en-us/search?pq=%7Crelevance%7Cauthor%3AChristine+M.+Piotrowski),(2009). Professional Practice for Interior Designers, 6th Edition, Wiley Publishers
2. [Roderick Adams](https://www.routledge.com/search?author=Roderick%20Adams), (2002) Interior Design, A Global Profession, Routledge Publishers
3. [Harold Linton](https://www.bloomsbury.com/in/author/harold-linton/), [William Engel](https://www.bloomsbury.com/in/author/william-engel/), Portfolio Design for Interiors, Bloomsbury Publishing.
4. Deshpande, R.S. (2005); Modern Ideal Homes for India, Deshpande Publication, Poona.
5. Tessie, A., (2001), The House, its Plan and Use, J.B. Lippincett, New York.
6. Day P.G. (2002), A guide to Professional Architectural and Industrial Scale Model Building, Eagle wood clifts, N.J. Prentice Hall.
7. Indian Standards Institutions (2003), National Building Code of India ISI rol, 1 New Delhi, MarakBhavan.

**Supplementary Readings**

1. [Katherine E. Kennon](https://www.amazon.in/Katherine-E-Kennon/e/B00JGSGTX4/ref=dp_byline_cont_book_1), The Codes Guidebook for Interiors, Wiley Publishers
2. [Winchip Susan](https://www.flipkart.com/books/winchip-susan~contributor/pr?sid=bks), Professional Practice for Interior Design in the Global Marketplace, Bloomsbury Publishing (UK)

Mapping with Programme Outcomes

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| COs | PO1 | PO2 | PO3 | PO4 | PO5 |
| CO1 | H | L | H | M | L |
| CO2 | - | M | H | - | M |
| CO3 | H | H | H | L | M |
| CO4 | M | L | H | M | L |
| CO5 | H | - | H | M | H |

PO – Programme Outcome, CO – Course outcome