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| M.sc., home science – interior design and decor |
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| **SYLLABUS****FROM THE ACADEMIC YEAR****2023 - 2024** |
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| **TAMILNADU STATE COUNCIL FOR HIGHER EDUCATION, CHENNAI – 600 005** |
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# INTRODUCTION

Home Science is both multidisciplinary and interdisciplinary in its context encompassing five major disciplines which includes Family Resource Management, Foods and Nutrition, Textiles and Clothing, Human Development, and Extension Education. Each discipline has one or more specific areas of specialization. Each specialization under Home Science offers a wide array of courses that prepare students for employment or setting up an enterprise in a wide range of sectors such as healthcare, childcare, food and hospitality, textiles, home and office interiors. Further, all courses of the programme are designed to improve the lifestyle of the individual, family and society that could most certainly contribute to the holistic development of the community.

The course curriculum for this programme has been planned to improve the employability potential and increase the scope for higher education. Globalization has created a market for jobs with different skills in the areas of food and healthcare industries and can thus contribute to the professional growth of students enrolled in this programme. This programme facilitates action-based research in various fields with the advantage of nurturing critical and analytical thinking that pave the way for innovation and entrepreneurship.

The interior design profession plays a crucial role in shaping our built environment and enhancing the quality of our lives. Interior designers have the expertise to optimize the functionality and usability of interior spaces. Well-designed interiors have a direct impact on our well-being and quality of life. Interior designers consider aspects such as ergonomics, acoustics, and lighting to create spaces that promote comfort, productivity, and a sense of well-being. With a growing focus on sustainable design practices, interior designers are playing a vital role in incorporating eco-friendly materials, energy-efficient systems, and sustainable strategies into their projects. In commercial spaces, interior design helps businesses create a unique brand identity and provide memorable experiences for their customers. Interior designers often collaborate with architects, contractors, and other professionals to ensure the seamless execution of a project. Overall, the interior design profession contributes significantly to the functional, aesthetic and experiential aspects of our built environment, making it an essential discipline in shaping the spaces we live, work, and interact in.

#

# PROGRAMME OBJECTIVE (POB) OF PG DEGREE PROGRAMME

|  |
| --- |
| **The M.Sc. Programme in Home Science –****Interior Design & Decor aims to achieve the following objectives:** |
| **POB1** | Develop ability to apply design principles in day-to-day life and expose students to the various developments seen in art and design industries. |
| **POB2** | Acquire the ability and behavioral skills required for successful social adaptation, that enables students to work in groups, apply knowledge and ideas effectively both verbally and in writing. |
| **POB3** | Train students with appropriate skills required to adapt easily to the ever- changing global scenario and gain access to suitable career opportunities. |
| **POB4** | Improve skills in observation and drawing logical inferences from space planning. |
| **POB5** | Explore various mediums and technologies to express their creativity and understand the role of art making in the larger social context. |

* + - 1. **PROGRAMME OUTCOMES (PO) OF PG DEGREE PROGRAMME**

|  |
| --- |
| **On successful completion of M.Sc. Home Science Interior Design & Décor the student is expected to :** |
| **PO1** | Develop designs for both residential and commercial spaces by applying the concept of art and interior design with suitable building materials and which create a sustainable environment. |
| **PO2** | Assess and analyze the art principles and colour theories that are most suitable and applicable to surface finishes. |
| **PO3** | Design and develop 2D and 3D floor plans, building system, kitchen and furniture arrangements using ergonomic principles |
| **PO4** | Formulate hypotheses and thus find solutions for research problems. |
| **PO5** | Cultivate professional skills to be inducted in the field of interior design and décor. |

* + - 1. **PROGRAMME SPECIFIC OUTCOMES (PSO) OF PG DEGREE PROGRAMME**

|  |
| --- |
| **On successful completion of M.Sc. degree in Home Science – Interior Design &****Decor the student is expected to:** |
| **PSO1** | Implement the concepts of design elements, art principles, color and lighting theories in planning interiors and exteriors with optimum use of resources in building services. |
| **PSO2** | Evaluate the characteristics of various hard & soft materials and finishes inplanning residential and commercial spaces and in turn providing eco-friendly environment to meet the community needs. |
| **PSO3** | Analyze the various styles of interiors from historical period till modern days to create an aesthetic and ergonomic design in planning furniture, interior andexterior spaces. |
| **PSO4** | Implement the skills of communication, graphic design, various perspectives of home science and professional practice to develop new research ideas andmeet the consumer requirements with effective use of resources. |
| **PSO5** | Demonstrate designs and plans effectively to the clients using various software, apps and technology and possess entrepreneurial skills and competencies. |
| **PSO6** | Develop research ideas in creating aesthetic and sustainable buildings with efficient use of renewable resources for that are eco-friendly. |

 **Template for P.G., Programmes**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Semester–I** | **Credit** | **Hours** | **Semester-II** | **Credit** | **Hours** | **Semester-III** | **Credit** | **Hours** | **Semester–IV** | **Credit** | **Hours** |
| 1.1. Core-I  | 5 | 7 | 2.1. Core-IV  | 5 | 6 | 3.1. Core-VII | 5 | 6 | 4.1. Core-XI  | 5 | 6 |
| 1.2 Core-II  | 5 | 7 | 2.2 Core-V  | 5 | 6 | 3.2 Core-VII  | 5 | 6 | 4.2 Core-XII | 5 | 6 |
| 1.3 Core – III  | 4 | 6 | 2.3 Core – VI | 4 | 6 | 3.3 Core – IX | 5 | 6 | 4.3 Project with viva voce | 7 | 10 |
| 1.4 Discipline Centric Elective -I | 3 | 5 | 2.4 Discipline Centric Elective – III | 3 | 4 | 3.4 Core – X  | 4 | 6 | 4.4Elective - VI (Industry / Entrepreneurship) 20% Theory80% Practical  | 3 | 4 |
| 1.5 Generic Elective-II:  | 3 | 5 | 2.5 Generic Elective -IV:  | 3 | 4 | 3.5 Discipline Centric Elective - V  | 3 | 3 | 4.5 Skill Enhancement course / Professional Competency Skill  | 2 | 4 |
|  |  |  | 2.6 NME I | 2 | 4 | 3.6 NME II | 2 | 3 | 4.6 Extension Activity | 1 |  |
|  |  |  |  |  |  | 3.7 Internship/ Industrial Activity | 2 | - |  |  |  |
|  | **20** | **30** |  | **22** | **30** |  | **26** | **30** |  | **23** | **30** |
| **Total Credit Points -91** |

**Choice Based Credit System (CBCS), Learning Outcomes Based Curriculum Framework (LOCF) Guideline Based Credits and Hours Distribution System**

**for all Post – Graduate Courses including Lab Hours**

**First Year – Semester – I**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **List of Courses** | **Credits** | **No. of Hours** |
|  | Core – I | 5 | 7 |
| Core – II | 5 | 7 |
| Core – III | 4 | 6 |
| Elective – I | 3 | 5 |
| Elective – II | 3 | 5 |
|  |  | **20** | **30** |

**Semester-II**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **List of Courses** | **Credits** | **No. of Hours** |
|  | Core – IV | 5 | 6 |
| Core – V | 5 | 6 |
| Core – VI | 4 | 6 |
| Elective – III | 3 | 4 |
| Elective – IV | 3 | 4 |
| Skill Enhancement Course [SEC] - I | 2 | 4 |
|  |  | **22** | **30** |

**Second Year – Semester – III**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **List of Courses** | **Credits** | **No. of Hours** |
|  | Core – VII | 5 | 6 |
| Core – VIII | 5 | 6 |
| Core – IX | 5 | 6 |
| Core (Industry Module) – X | 4 | 6 |
| Elective – V | 3 | 3 |
| Skill Enhancement Course - II | 2 | 3 |
|  | Internship / Industrial Activity [Credits] | 2 | - |
|  |  | **26** | **30** |

**Semester-IV**

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **List of Courses** | **Credits** | **No. of Hours** |
|  | Core – XI | 5 | 6 |
| Core – XII | 5 | 6 |
| Project with VIVA VOCE | 7 | 10 |
| Elective – VI (Industry Entrepreneurship)  | 3 | 4 |
| Skill Enhancement Course – III / Professional Competency Skill | 2 | 4 |
| Extension Activity | 1 | - |
|  |  | **23** | **30** |

**Total 91 Credits for PG Courses** **CREDIT DISTRIBUTION FOR PG PROGRAMME**

**M.Sc. Home Science - Interior Design & Decor**

**First Year**

* + - 1. **CONSOLIDATED TABLE FOR CREDITS DISTRIBUTION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| PART A  | Category of Courses | Credits foreach Course | Number ofCourses | Number of Credits in each Category of Courses | Total Credits | Total Credits for the Programme |
| Core |  |  |  |  | 80 (CGPA) |
| Project with viva voce |  |  |  |
| Industry aligned Programmes-  |  |  |  |
| Elective (Generic and Discipline Centric) |  |  |  |
| PART B (i) | Skill Enhancement (Term paper and Seminar & Generic / Discipline -Centric Skill Courses)(Internal Assessment Only) |  |  |  |  |
| PART B (ii) (iii) | Ability Enhancement (Soft skill) |  |  |  |  | 11(Non CGPA) |
| Summer Internship |  |  |  |
| PART C | Extension Activity |  |  |  |  |
|  |  | 91 |

**M.Sc. Home Science - Interior Design & Decor**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **First Year Semester-I** | **Credit** | **Hours per week** |
| . Core-I  | History of Design | 5 | 7 |
|  Core-II  | Application of Art and Design | 5 | 7 |
|  Core – III  | Space Planning Practical | 4 | 6 |
| Discipline Centric Elective -I |  (Generic / Discipline Specific) (One from Group A)EC1 Furniture Design | 3 | 5 |
| Generic Elective-II:  | Elective II (Generic / Discipline Specific) (One from Group B)EC2 Landscaping & Ornamental Gardening | 3 | 5 |
|  | **Total** | **20** | **30** |

**Semester-II**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Credit** | **Hours per week** |
|  Core-IV  | Sustainability in Building Science | 5 | 6 |
|  Core-V  | Textile Science | 5 | 6 |
| Core – VI | Furnishing in Interiors Practical | 4 | 6 |
| Discipline Centric Elective – III | Elective III (Generic / Discipline Specific) (One from Group C)EC3 Research Methodology and Statistics | 3 | 4 |
| Generic Elective -IV:  | Elective-IV (Computer / IT related) (One from Group D)EC4 Advanced Graphic Design | 3 | 4 |
| NME I | Skill Enhancement Course -SEC 2 (One from Group G) Flower Arrangement | 2 | 4 |
|  | **Total** | **22** | **30** |

**Second Year - Semester-III**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Credit** | **Hours per week**  |
|  Core-VII | CC7 - AUTOCAD in Interiors | 5 | 6 |
| Core-VIII  | CC8 – Commercial Interiors | 5 | 6 |
| Core – IX | CC9 – 3D Modelling in Design Practical | 5 | 6 |
| Core – X  | Visual Merchandising | 4 | 6 |
| Discipline Centric Elective - V  | Industry Module - Renewable Energy Resources / Traditional Folk Art | 3 | 3 |
| NME II | Skill Enhancement Course - SEC 3: Professional Communication Skill Term paper & Seminar presentation Research Writing and Presentation | 2 | 3 |
| Internship/ Industrial Activity | Internship / Industrial Activity (Carried out in Summer Vacation at the end of I year – 30 Days | 2 | - |
|  | **Total** | **26** | **30** |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Semester-IV** | **Credit** | **Hours per week** |
| Core-XI  | Resource Management | 5 | 6 |
|  Core-XII | Ergonomics in Interiors | 5 | 6 |
| Project Work | Project with viva voce | 7 | 10 |
| (Generic / Discipline Specific) Elective - VI  |  (One from Group F)EC6 Perspectives of Home Science(Industry / Entrepreneurship) 20% Theory 80% Practical | 3 |  4 |
|  Skill Enhancement course / Professional Competency Skill  | Professional Practice in Interiors / Styles in Interiors Training for Competitive Examinations Home Science for NET / SET / TRB Competitive Examinations (2 Hours)General Studies for Paper 1 - NET / SET, UPSC Other Competitive Examinations (2 hours) | 2 | 4 |
| Extension Activity | Extension Activity | 1 |  |
|  | **Total** | **23** | **30** |

**TOTAL CREDITS: 91**

**11.2 Consolidated Table for Credits Distribution**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| PART A  | Category of Courses | Credits foreach Course | Number ofCourses | Number of Credits in each Category of Courses | Total Credits | Total Credits for the Programme |
| Core | 4 | 12 | 48 | 72 | 80 (CGPA) |
| Project with viva voce | 3 | 1 | 3 |
| Industry aligned Programmes-  | 3 | 1 | 3 |
| Elective (Generic and Discipline Centric) | 3 | 6 | 18 |
| PART B (i) | Skill Enhancement (Term paper and Seminar & Generic / Discipline -Centric Skill Courses)(Internal Assessment Only) | 2 | 4 | 8 | 8 |
| PART B (ii) (iii) | Ability Enhancement (Soft skill) | 2 | 4 | 8 | 10 | 11(Non CGPA) |
| Summer Internship | 1 | 2 | 2 |
| PART C | Extension Activity | 1 | 1 | 1 | 1 |
|  |  | 91 |

**11.3 Semester**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  **Code** | **Category**  |  Title of the Paper |  **Marks (Max 100)** | **Duration for UE** | **Credits** |
| **CIA** | **UE** |
| Semester –I  |
| Part A | Core I | History of Design | 25 | 75 | 3 Hrs | 4 |
| Core II | Application of Art and Design | 25 | 75 | 3 Hrs | 4 |
| Core III | Space Planning Practical | 25 | 75 | 3 Hrs | 4 |
| Elective I | Elective-I Furniture Design | 25 | 75 | 3 Hrs | 3 |
| Elective II | Elective-I ILandscaping & Ornamental Gardening | 25 | 75 | 3 Hrs | 3 |
| Part B | Skill Enhancement Course -SEC 1 | Furniture Arrangement | Internal Assessment | 2 |
| Ability Enhancement Course (AECC 1) | Soft Skill I  | Performance based assessment | 2 |
|  Semester-II |
| Part A | Core IV | Sustainability in Building Science | 25 | 75 | 3 Hrs | 4 |
| Core V | Textile Science | 25 | 75 | 3 Hrs | 4 |
| Core VI | Furnishing in Interiors Practical | 25 | 75 | 3 Hrs | 4 |
| Elective III | Elective-IIIResearch Methodology | 25 | 75 | 3 Hrs | 3 |
| Elective IV | Elective-IVAdvanced Graphic Design | 25 | 75 | 3 Hrs | 3 |
| Part B | Skill Enhancement Course -SEC 2 | Flower Arrangement | Internal Assessment | 2 |
| Ability Enhancement Course (AECC 2) | Soft Skill II  | Performance based assessment | 2 |

|  |
| --- |
|  Semester-III |
| Part A | Core VII | AUTOCAD in Interiors | 25 | 75 | 3 Hrs | 4 |
| Core VIII | Commercial Interiors | 25 | 75 | 3 Hrs | 4 |
| Core IX | 3D Modelling in Design Practical | 25 | 75 | 3 Hrs | 4 |
| Elective / ED V |  Elective-VI /ED-VVisual Merchandising | 25 | 75 | 3 Hrs | 3 |
| Core X Core Industry Module  | (Choose from outside the Department) Renewable Energy Resources  | 25 | 75 | 3 Hrs | 3 |
| Part B |  |
|  | Skill based.(Term paper and Seminar) | Assignment of problem by the faculty Lecture -I (by the student) 25%Lecture-II (by the student) 25%Lecture-III (by the student) 25%Submission of a write-up (10-15 pages using LaTeX) 25% Marks / Grade Point/ Letter Grade as per the Regulation) Research Writing and Presentation | 2 |
| Ability Enhancement Course (AECC 3) | Soft Skill III Traditional Folk Art | Performance based assessment | 2 |
| Internship / Industrial - Vacation Activity  | 2 |
| Semester-IV |
| Part A | Core X | Resource Management | 25 | 75 | 3 Hrs | 4 |
| Core XI | Ergonomics in Interiors | 25 | 75 | 3 Hrs | 4 |
| Core XII | Professional Practice in Interiors  | 25 | 75 | 3 Hrs | 4 |
| Project with viva voce XIII | Project with viva voce | 25 | 75 | 3 Hrs | 3 |
| Elective VI | Elective-VIPerspectives of Home Science | 25 | 75 | 3 Hrs | 3 |
| Part B | Skill Enhancement Course -SEC 4 | Professional Competency Skill Enhancement Course Home Science for NET/SET Competitive Exam | Internal Assessment | 2 |
| Ability Enhancement Course (AECC4) | Soft Skill IV Styles in Interiors | Performance based assessment | 2 |
| Part C | Extension Activity | Performance based assessment | 1 |
|  **Total Credits**  | **91** |

**11.4 Instructions for Course Transaction**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Courses | Lecture hrs | Tutorial hrs | Lab Practice | Total hrs |
| Core | 75 | 15 | -- | 90 |
| Electives | 75 | 15 | -- | 90 |
| ED | 75 | 15 | -- | 90 |
| Lab Practice Courses | 45 | 15 | 30 | 90 |
| Project  | 20 | -- | 70 | 90 |

**SEMESTER I**

**CORE I**

**CC1 - HISTORY OF DESIGN**

**Time/Hrs: Theory: 5 Hrs Year: I**

**Credits: 4 Semester: I**

# LEARNING OBJECTIVES

**To enable the students to**

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

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Understand the architectural features of prehistoric & Egyptian period | **K2** |
| **CO2** | Analyze the different European styles of architecture | **K4** |
| **CO3** | Interpret the colonial and oriental influence in interiors | **K3** |
| **CO4** | Compose modern architecture based on the Indian historical features | **K6** |
| **CO5** | Illustrate the modern and post-modern styles of interiors | **K4** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

#  THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Prehistoric & Egyptian interiors -** Plan, Materials, Furniture Ornamentation & Accessories Used for Shelters in Stone Age – Cave paintings, Parts & Plan of Stonehenge & Egypt - symbolism, characteristic features of Obelisks, Pyramids, Egyptian paintings - Egyptian dance & battle of Nubia. | **10** |
| **UNIT II** | **European Interiors**- Categorization of Rooms, Furniture, Materials Used for Buildings in Greece & Rome- Orders, Parthenon, Pantheon & Colosseum, Medieval - Pantheon, Late Renaissance- St. Peter’s Basilica, Laurentian Library, Baroque- St. peter’s Basilica and Rococo Architecture - Ballroom in the Schaezlerpalais. | **20** |
| **UNIT III** | **Oriental and Colonial interiors** - Types of Materials used, Parts of the Building, Furniture and other Interior Aspects of Buildings in Japanese- wood, roofs, shoji & fusuma, Tatami, Engawa, Genkan, Nature inspired. Chinese- Lumber, Low Rise, Roof, Colours, Symmetrical Layouts, Hierarchical Layout, South Facing, Consistency, and Indian Colonial Architecture - Victorian Memorial Hall, Secretariat in Delhi, Madras High Court. | **15** |
| **UNIT IV** | **Indian interiors** - Historical Perspectives, Architectural Styles and Contemporary Trend in Furniture, Space Allocation, Local Material Usage and Furniture Used in Rajasthan - Amber Palace, Gujarat- Rajmahal at Mehsana, Chettinad - Karaikudi houses, Kerala - The Mattancherry Palace and Pondicherry - White town Architecture. | **15** |
| **UNIT V** | **Modern & Post-Modern interiors-** The Style Statements of Modern Periods - Art Nouveau- Casa Battlo, Art Deco- Chrysler Building, Eclecticism- Carson Mansion, High Tech - Lloyd’s Building, Minimalism- Heydar Aliyev Center, Deconstructivism - Walt Disney Concert Hall. | **15** |
| **Total** | **75** |

 **REFERENCES**

1. [Vedula VLN Murthy](https://www.amazon.in/s/ref%3Ddp_byline_sr_book_1?ie=UTF8&field-author=Vedula+VLN+Murthy&search-alias=stripbooks) (2020). ARCHITECTURE PRE-HISTORIC TO PRE-GOTHIC - WEST ASIA, MEDITERRANEAN AND EUROPE, Standard Publishers and Distributors Pvt Ltd
2. [R. Engelbach](https://www.amazon.in/s/ref%3Ddp_byline_sr_book_1?ie=UTF8&field-author=R.+Engelbach&search-alias=stripbooks), [Somers Clarke](https://www.amazon.in/Somers-Clarke/e/B001KIV6UE/ref%3Ddp_byline_cont_book_2)(2014), Ancient Egyptian Construction and Architecture, Dover Publications Inc.
3. WimPauwels (2012), Contemporary Architecture & Interiors.
4. John Wiley &sons.Inc (2013), A history of interior design – 4th edn.
5. Robbie.G. Blakemore, (2005), History of Interior Design and Furniture. From Ancient Egypt to Nineteenth – Century Europe, Wiley Publishers
6. [John Potvin](https://www.amazon.in/s/ref%3Ddp_byline_sr_book_1?ie=UTF8&field-author=John+Potvin&search-alias=stripbooks) (2015), Oriental Interiors: Design, Identity & Space, Bloomsbury Academic Publishers

# E-LEARNING RESOURCES

* [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.toki.tokyo/blogt/2020/4/8/eight-elements-of-japanese-architecture>
* <https://www.chinahighlights.com/travelguide/architecture/>
* <https://www.chinahighlights.com/travelguide/architecture/features.htm>
* <https://www.houzz.in/magazine/what-is-kerala-architecture-stsetivw-vs~116858736>

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | S | S | S | W | M | M |
| **CO2** | M | S | S | W | M | M |
| **CO3** | M | S | S | W | M | M |
| **CO4** | M | S | S | W | S | M |
| **CO5** | M | S | S | M | S | M |

**CORE II**

**CC2 - APPLICATION OF ART & DESIGN**

 **Time/Hrs: Theory: 3 Hrs, Practical: 2 Hrs Year: I**

 **Credits: 4 Semester: I**

**LEARNING OBJECTIVES**

# To enable the students to

1. Use design elements and principles of art effectively in designing interiors and exteriors.
2. Analyze and use the appropriate color schemes and lighting fixtures for the interiors and exteriors.
3. Create and implement innovative ideas in developing interior accessories and flower arrangement styles.

#

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Understand and apply the art and design in interiors and exteriors. | **K1, K2, K3** |
| **CO2** | Create innovative flower arrangement styles and apply them in various occasions and needs. | **K3, K6** |
| **CO3** | Develop or schemes using color palette and suggesting them in various areas of interiors and exteriors. | **K5, K6** |
| **CO4** | Apply proper lighting for efficient lighting in interiors and exteriors. | **K2, K3, K5** |
| **CO5** | Understand and apply various accessories and pictures in selection and arrangement with relation to the background of interiors. | **K2, K3, K6** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

#  THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** |  **CONTENT** | **HOURS** |
| **UNIT I** | **Design:** Design - Definition, Concept, Requirements of Good Design, Types of Design - Structural and Decorative - Naturalistic, Conventional, Geometric, Abstract. Elements of Design - Line & its Type, Shape and Form, Texture, Direction, Space and Size, Color, Value. Principles of design - Proportion, Balance, Rhythm, Emphasis and Harmony. Application of Design in Interiors and Exterior Wall Finishes. | **15** |
| **UNIT II** | **Flower Arrangement:** Flower Arrangement - Definition, importance of flower arrangement, Styles of flower arrangement – Traditional, Oriental/Japanese styles - Ikebana, Moribana, Nagarie, Shikibana, Morimono, Rikka, Ukibana and Modern. Selection of containers based upon styles of arrangement. Flowers – Names, its colours, textures and its visual perception in various indoor spaces. | **20** |
| **UNIT III** | **Colour:** Colour Theory - Additive Colour, Subtractive Colour, Warm & Cool Colors. Developing colour schemes related to colour harmony – Achromatic, Accented, Analogous, Triad and Tetrad. Application of colour psychology and illusion in various areas of interiors and exteriors. | **10** |
| **UNIT IV** | **Lighting:** Lighting requirements - Definition and Importance of lighting. Ideal light requirements, Lighting Units - foot candle, candela, Lumen, Watt. Types of light bulb - Incandescent lamps, Compact fluorescent lamps (CFL), Halogen lamps, Metal halide Lamps, Light Emitting Diode (LED),. Types of lighting - General/ Ambient lighting, Task/Spot lighting, Architectural lighting - valance, soffit, bracket, cone, recessed, cornice. **Lighting fixtures:** Movable and immovable fixtures. Principles of home lighting, Glare - types and causes of glare. Suggestions for improving daylight illumination. | **15** |
| **UNIT V** | **Accessories:** Definition, Types of accessories, Selection and arrangement of accessories in various areas – living room, Dining room, bed room, study room with application of art principles and elements of design. **Pictures** – Concept, Selection of pictures, framing and mounting of pictures, Hanging law of margin in picture framing. | **15** |
| **Total** | **75** |

**PRACTICALS**

* 1. Creating hand-made accessories using waste materials and pictures frames in different styles.
	2. Painting different rooms using colour psychology and illusion of colours.
	3. Developing innovative flower arrangement styles for various occasions and needs.
	4. Applying design in interior and exterior wall.
	5. Market survey on recent trends in accessories.
	6. Draw lighting layout and Market survey on light and lighting fixtures.
	7. Prepare catalogue for wall accessories and various designs.

# REFERENCES

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* Foyr (2020), “Importance of Accessories in Interior Design”, <https://foyr.com/learn/accessories-in-interior-design/>
* Hamstech (2021), “Selection of Accessories in Interior Designing”, <https://www.hamstech.com/selection-of-accessories-in-interior-designing>
* Shuani, “Interior Decoration – Arrangement of Flowers”, [https://www.yourarticlelibrary.com/home-management/interior-decoration-](https://www.yourarticlelibrary.com/home-management/interior-decoration-arrangement-of-flowers/47903) [arrangement-of-flowers/47903](https://www.yourarticlelibrary.com/home-management/interior-decoration-arrangement-of-flowers/47903)

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | S | M | M | M | S | M |
| **CO2** | S | M | S | M | M | M |
| **CO3** | S | S | M | M | S | M |
| **CO4** | S | S | M | M | S | M |
| **CO5** | S | S | S | M | M | M |

**CORE III**

**CC 3 – SPACE PLANNING (Practical)**

 **Time/Hrs: Practical: 5 Hrs Year: I**

 **Credits: 4 Semester: I**

# LEARNING OBJECTIVES

 **To enable the students to**

1. Learn about the requirements in housing and design spaces accordingly.
2. Design commercial spaces suited to the needs.
3. Know the standard dimensions of furniture.

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Understand the needs and requirements of planning different spaces in residences. Apply designs to suit the requirements, create residential layouts for different Square feet areas. | **K2, K3, K6** |
| **CO2** | Outline the features of art principles. Apply various art principles to furnish a room thereby creating a specific mood. | **K2, K3, K6** |
| **CO3** | Analyze the requirements for designing commercial spaces. Design interior spaces for various commercial places | **K3, K4, K6** |
| **CO4** | Apply ergonomics in the design of furniture. Design furniture as per ergonomic standards. | **K2, K3, K6** |
| **CO5** | Categorize built in furniture in accordance to use. Design built in furniture with complete details | **K3, K4, K6** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

# PRACTICALS

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **House Plan**: Designing a residential space by implementing the principles of planning spaces with aspect, prospect, grouping, privacy, roominess, circulation and flexibility. Types of house plan, planning for different Square foot areas. | **20** |
| **UNIT II** | **Residential Interior Spaces**: Interior space arrangement like living room, bedroom dining, study and kitchen to achieve different moods – formal, informal, traditional, exotic, romantic, masculine and feminine. Creation of mood boards. | **15** |
| **UNIT III** | **Commercial Interior Spaces**: Designing commercial interior spaces like cafe, beauty parlor, boutique, kids store, snack bar, kiosk and office layout. | **15** |
| **UNIT IV** | **Furniture design**: Measured drawings of freestanding furniture, Multi- purpose, Innovative furniture, Door, Window, - Chair, Sofa, Bed, Dining table, Workstation - plan, elevation and view drawn to scale. | **10** |
| **UNIT V** | **Storage systems**: Functional analysis of storage systems and thereby deriving types of built in cabinets needed for interior spaces – Wardrobe, Kitchen cabinets, Designer shelves, Vanity Mirror, Vanity Storage, Bookshelf, TV wall unit, display systems. | **15** |
| **Total** | **75** |

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2. James Orrom (2018), Chair Anatomy: Design and Construction, Thames and Hudson Publishers
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4. Mark Karlen & Rob Fleming (2016), Space Planning Basics, Wiley Publishers
5. [Maureen Mitton](https://www.amazon.in/Maureen-Mitton/e/B001IGQEH8/ref%3Ddp_byline_cont_book_1) & [Courtney Nystuen](https://www.amazon.in/s/ref%3Ddp_byline_sr_book_2?ie=UTF8&field-author=Courtney%2BNystuen&search-alias=stripbooks) (2016), Residential Interior Design: A Guide to Planning Spaces, Wiley Publishers

# E-LEARNING RESOURCE

* <https://www.academia.edu/8258292/Space_Planning_Basics>
* <http://www.aboutcivil.org/site-selection-for-residential-buildings.html>
* [https://web.hettich.com/fileadmin/media/company/Das\_Ideenbuch\_2018\_HHW\_17785\_e](https://web.hettich.com/fileadmin/media/company/Das_Ideenbuch_2018_HHW_17785_en.pdf) [n.pdf](https://web.hettich.com/fileadmin/media/company/Das_Ideenbuch_2018_HHW_17785_en.pdf)
* https://catalogimages.wiley.com/images/db/pdf/9781118090787.excerpt.pdf
* https://cdn2.hubspot.net/hubfs/3360471/RhinoInteriorsGroup\_May2018/Docs/Rhino\_offi ceinteriordesign.pdf

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | S | M | M | M | M | W |
| **CO2** | S | M | M | M | M | W |
| **CO3** | S | S | M | M | M | W |
| **CO4** | M | S | S | M | M | M |
| **CO5** | M | S | S | M | M | M |

**ELECTIVE COURSE I**

**EC1 - FURNITURE DESIGN**

 **Time/Hrs: Theory: 5 Hrs, Year: I**

 **Credits: 3 Semester: I**

**LEARNING OBJECTIVES**

# To enable the students to

1. Understand the basic guidelines of furniture design.
2. Get familiar with the different types of materials used in designing furniture.
3. Learn the styles of popular furniture designers.

#

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Understand the design details of a furniture | **K1, K2** |
| **CO2** | Analyze the designs of popular designers from Medieval to modern period | **K1, K2, K4** |
| **CO3** | Understand the features of various materials used in furniture design. | **K2** |
| **CO4** | Summarize the templates and proportions | **K1, K2** |
| **CO5** | Analyze the methods of cabinet construction and select the best suitable method for the given purpose on hand | **K1, K4** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

#  THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Introduction to furniture design****Furniture**- Meaning and importance, classification, factors influencing furniture decisions – family needs, preferences, availability, principles of design and financial limit.**Residential furniture Types**: Table, chair, sofa, cabinet, bed, wardrobe, dining table, wall unit. Application of Golden Ratio in furniture design. Art principles in furniture design.  | **15** |
| **UNIT II** | **Furniture styles**1. **Traditional/classic style:** a. Ethnic style. b. Contemporary style.
2. **Types of furniture:** a. Daily uses furniture b. Loose carpentry furniture c. Fixed carpentry furniture. d. Multi-utility storage e. Open & closed storage.

Importance of anthropometric and ergonomics. | **15** |
| **UNIT III** | **Materials****Familiar furniture materials** – Wood – teak, rose wood, walnut, cedar, mahogany, pine, birch, Sal and Plywood, Bamboo, Cane, Glass, Concrete, Metals, Plastics, and Leathers.**Modern materials** – wood based panels such as plywood, MDF, HDF, Particle board , pre laminated boards; fiber glass, veneers  | **15** |
| **UNIT IV** | **Construction of Cabinets****Steps** involved in cabinet construction, T V units, wall accessories unit & Bedding furniture. **Construction features of furniture** – shaping, carving, turning, fluting, reeding, joining and finishes. Upholstering designs.  | **15** |
| **UNIT V** | **Carpentry joint** **Finishes**- Shaping, carving, tapestry, turning, fluting, reeding, joining and finishes joining of furniture.**Types of joints** i. Butt joint ii. Mitre joint iii. Lap joint iv. Mortise and Tenon joint v. Tongue and groove joint vi. Housed joint vii. Cross joint **Joints used in furniture** - Joints used in doors/ windows/ ventilators. | **15** |
| **Total** | **75** |

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# E-LEARNING RESOURCES

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* <https://catalogimages.wiley.com/images/db/pdf/9781118090787.excerpt.pdf>
* ([https://www.google.co.in/books/edition/Illustrated\_History\_of\_Furniture/j8AgAAAAM](https://www.google.co.in/books/edition/Illustrated_History_of_Furniture/j8AgAAAAMAAJ?hl=en&gbpv=1) [AAJ?hl=en&gbpv=1](https://www.google.co.in/books/edition/Illustrated_History_of_Furniture/j8AgAAAAMAAJ?hl=en&gbpv=1))
* <https://koalaliving.com.au/blog/golden-ratio-design-template>

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | S | M | S | W | S | S |
| **CO2** | M | M | S | M | S | S |
| **CO3** | W | M | S | M | S | S |
| **CO4** | S | M | S | S | S | S |
| **CO5** | S | S | S | W | S | S |

**ELECTIVE II**

**EC2 - LANDSCAPING & ORNAMENTAL GARDENING**

 **Time/Hrs: Theory: 3 Hrs, Practical: 2 Hrs Year: I**

 **Credits: 3 Semester: I**

**LEARNING OBJECTIVES**

#  To enable the students to

1. Acquire skill in identifying the ornamental flowers, shrubs and trees.
2. Develop a conceptual understanding of landscape design principles and gardening components for various built forms.
3. Create designs in integrating landscape and ornamental gardening with built environment.

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Apply principles of design to create best suited design in lawn making and landscaping | **K2, K3, K6** |
| **CO2** | Evaluate the integral and supplementary elements to createornamental garden design | **K5, K6** |
| **CO3** | Assess, understand and evaluate the different styles andkinds of garden. | **K2, K5** |
| **CO4** | Create designs in urban landscape and prepare bio-aesthetic plans for different areas. | **K3, K6** |
| **CO5** | Classify different kinds of indoor and outdoor plants; analyzefactors for developing patterns in the landscape area. | **K2, K4, K6** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

#  THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Landscaping** –Definition, Importance and Principles of Design in Landscaping. Requirements in Landscape Area- Site & Location, Site Evaluation, Soil Properties, Water Systems, Climatic Conditions and Lighting. Lawn and Lawn Maintenance-Planning and Execution of Lawn Making, Public and Private Garden. Importance of Kitchen Garden. | **10** |
| **UNIT II** | **Ornamental Gardening**-Definition, Components of Garden- Arboretum. Shrubbery, Fernery, Arches and Pergolas, Edges and Hedges. Integral Elements of Garden- Climbers and Creepers, Cacti & Succulents, Herbs, Annuals & Perennials, Flower Borders & Beds. Supplementary Elements of Garden- Ground Covers, Carpet Beds, Bamboo Grooves, Topiary and Garden Adornments. Planning and Designing of Ornamental Gardens | **15** |
| **UNIT III** | **Styles and Types of Landscape Garden**: Garden Styles: Formal, Informal and Freestyle, Wild Gardening, Types of Gardens: Persian, Mughal, Japanese, English, Italian, Buddha, Spanish and Vanams.Special Types of Gardens: Vertical Garden, Roof Garden, Bog Garden, Sunken Garden, Rock Garden, Clock Garden, Bonsai Gardens, Temple Garden & Sacred Groves. | **20** |
| **UNIT IV** | **Urban Landscaping**: Landscape Design for Specific Areas & Occasions- Industries, Institutions, Hospitals, Roadsides Residents, IT Parks, Restaurants, And Corporate Offices.Bio Aesthetic Planning- Eco Tourism, Botanical Gardens, Theme Parks, Indoor Gardening, Terrarium, Hydroponic Gardens, Therapeutic Gardening, Non -Plant Components, Water scaping, Xeriscaping and Hardscaping. | **20** |
| **UNIT V** | **Indoor-Outdoor Plants** -Kinds and Classification, Factors Influencing Growth of Plants. Planning and Execution of Landscape Design Based on the Styles and Kinds of Plants. | **10** |
| **Total** | **75** |

 **PRACTICALS**

1. Selection of ornamental plants, practices in preparing home garden designs/industrial gardens/institutional gardens/corporate.
2. Avenue planting, lawn making, planting herbaceous and shrubbery borders, project preparation on landscaping for different situations,
3. Visit to parks and botanical gardens.
4. Draw 2D and 3D landscape design.

# REFERENCES

1. A K Tiwari (2012) Fundamentals of Ornamentals Horticulture and Landscape Gardening, NIPA publisher
2. Alka singh (2015) A colour handbook: Landscape gardening, NIPA publisher
3. Desh raj (2017) Floriculture at a glance, Kalyani publishers
4. G. S. Randhawa, A.N. Mukhopadyay, A. Mukhopadhyay (1998) Floriculture in India, Jai deep publishers Delhi.
5. Harikrishnan Paliwal (2013) Ornamental Gardening- A user’s Companion, Jain Publishing
6. Company, Newdelhi
7. [M Kannan , P Ranchana ,](https://www.amazon.in/s/ref%3Ddp_byline_sr_book_1?ie=UTF8&field-author=M%2BKannan&search-alias=stripbooks) [S Vinodh](https://www.amazon.in/s/ref%3Ddp_byline_sr_book_3?ie=UTF8&field-author=S%2BVinodh&search-alias=stripbooks) (2016) Ornamental Gardening and Landscaping, New India publishing agency

# E-LEARNING RESOURCES

* + - * <http://www.megagriculture.gov.in/PUBLIC/floriculture_objectives.aspx>
			* <http://ncert.nic.in/vocational/pdf/kegr101.pdf>
			* <http://agritech.tnau.ac.in/horticulture/horti_Landscaping_freshflower.html>
			* <https://www.basicsofgardening.com/types-of-garden>
			* <https://www.designcad.com.au/wp/Docs/Landscape%20Design%20and%20CAD.pdf>

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | S | S | M | M | S | S |
| **CO2** | S | S | M | M | S | M |
| **CO3** | S | S | S | M | S | M |
| **CO4** | S | S | S | S | S | S |
| **CO5** | S | S | M | M | S | M |

**SKILL ENHANCEMENT COURSE – I**

**SEC1 – FURNITURE ARRANGEMENT**

**Time/Hrs: Theory: 3 Hrs, Year: I**

**Credits: 2 Semester: I**

**Learning objectives:**

#  To enable the students to

1. Acquire basic knowledge of arranging furniture in a residential space.
2. Draw different ways of furniture arrangement for commercial spaces

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Understand the proportion, placement and arrangement of furniture for different spaces. | **K1, K2, K6** |
| **CO2** | Develop furniture layout for various spaces in a residence. | **K2, K6** |
| **CO3** | Develop furniture templates for residence. | **K6** |
| **CO4** | Identify the requirements for furniture arrangement for different income groups | **K2, K6** |
| **CO5** | Acquire knowledge on the care & maintenance of furniture. | **K1, K2** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

#  THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | Arrangement of furniture using principles of design, general guiding concepts in arranging furniture, planning furniture for selected activities. Selection and arrangement – Commercial furniture. Executive table/ office table, Reception table, cabinet storage, Display unit. | **10** |
| **UNIT II** | Draw furniture designing & detailing in different rooms – Living room, Study room, Pooja room, Dining room, bedroom. Draw Free hand sketches of graphic symbol of furniture. | **10** |
| **UNIT III** | Templates & Proportions - Placement and arrangement of furniture in different rooms - Living room, Study room, Bedroom & Dining room. Basic guidelines involved in furniture proportions & templates. | **10** |
| **UNIT IV** | Principles of design in furniture arrangement. Minimalistic requirements of Furniture in Low income, Middle income and High-income families. | **5** |
| **UNIT V** | Care of different types of furniture – wood, metals, plastic, and cane. Furniture polishes – types, natural and synthetic varnishes. | **5** |
|  | Practicals:Field visit - Carpentry workshop.Model of carpentry joints.Demonstration of Staircase with the help of respective models.Draft a sheet of door/ window/ chair/ table/ bed (anyone) | **5** |
|  | **TOTAL** | **45** |

# REFERENCES:

1. [Gandotra V, Shukul M and Jaiswal](https://www.abebooks.com/servlet/SearchResults?an=Veena+Gandotra+Maneesha+Shukul+and+Neerja+Jaiswal&cm_sp=det-_-bdp-_-author) N, (2011). “Introduction to Interior Design and Decoration”, New Delhi: Dominant publishers, India
2. Chaudhari.S.N, (2006), “Interior Design”, Jaipur: Aavishkar Publisher, India
3. Stuart.L, (2013) “Furniture Design: An Introduction to Development, Materials and Manufacturing”, Laurence King Publishing, London.
4. Anita.T, (2011), “Textiles for Apparel and Home Furnishing”, New Delhi: Sonali Publications, India.
5. Kharuna.S, (2012), “Fabrics for Fashion and Textile Design”, New Delhi: Sonali Publications, India

# E-LEARNING RESOURCES

# htttp://homes.ieu.edu.tr/ffd301/INSTRUCTOR%20PRESENTATIONS/FFD301\_Presenta tion01\_history\_of\_furniture.pdf

# https://catalogimages.wiley.com/images/db/pdf/9781118090787.excerpt.pdf

# (https://www.google.co.in/books/edition/Illustrated\_History\_of\_Furniture/j8AgAAAAM AAJ?hl=en&amp;gbpv=1)

# <https://koalaliving.com.au/blog/golden-ratio-design-template>

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | S | S | S | M | M | M |
| **CO2** | S | S | S | M | M | M |
| **CO3** | S | S | S | M | M | M |
| **CO4** | S | S | S | M | M | M |
| **CO5** | S | S | S | M | M | M |

**CORE IV**

**CC4 – SUSTAINABILITY IN BUILDING SCIENCE**

 **Time/Hrs: Theory: 5 Hrs Year: I**

 **Credits: 4 Semester: II**

**LEARNING OBJECTIVES**

**To enable the students to**

1. Understand the importance of sustainability in the built environment.
2. Analyze the features of various materials that can be used to attain sustainability in buildings.
3. Get familiar with energy conservation and rating systems in buildings.

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Analyse the role of sustainability in human health & environment. | **K1, K4** |
| **CO2** | Identify the materials that can reduce energy consumption in buildings. | **K2** |
| **CO3** | Discuss various construction strategies in buildings for sustainability.  | **K1, K2** |
| **CO4** | Analyse the ways of conserving water in the built environment. | **K4** |
| **CO5** | Examine the ways of implementing energy conservation in buildings. | **K4,K6** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

# THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Concept of Sustainability**Sustainable building technology – Meaning, need for developing sustainable building concept in India,Importance of sustainable building technology, benefits of green buildings – environmental benefits, economic benefits, social benefits, Disadvantages of green buildings.Impact of sustainable building on human health and the natural environment. | **15** |
| **UNIT II** | **Eco friendly building materials & Finishes**Environmental impact study of building materials and finishes about composition, production, recycling and physical properties.Benefits of materials & finishes – Bamboo, straw bale, steel, wood, dimension stone, recycled plastic, Recycled stone, non-toxic metals, fly ash bricks, precast concrete slabs, Earth blocks-compressed, rammed earth and baked; flax linen, sisal, wood fibers, cork, coconut, non- VOC paints and polyurethane block, gypsum, cork, hempcrete, ferrock & timbercrete. | **15** |
| **UNIT III** | **Sustainable Construction techniques**DaylightingPassive heating methods: Direct solar gain, thermal mass, massing and orientation, trombe wall constructionPassive cooling methods: Natural ventilation – single sided, cross ventilation, stack effect; cooling tower, earth air tunnels, shading devices, courtyard effect, evaporative cooling, insulation. Cool roofs and roof ponds. | **20** |
| **UNIT IV** | **Water conservation**Water conservation technology – need for water conservation, Difference between water conservation and water efficiency, Strategies to save water at home.Rain water harvesting- meaning, importance of rain water harvesting, requirements of rain water harvesting structure, methods of rainwater harvesting systems – surface runoff and Roof top rainwater harvesting, advantages, Grey water usage. | **15** |
| **UNIT V** | **Energy conservation & rating systems**Building regulations-norms and standards, zoning, housing for special groups and areas, housing finance.Housing and environment - building materials - impact on environment, green rating systems - ECBC, NBC, GRIHA, IGBC, BEE energy efficiency in buildings, energy auditing, indices of indoor comfort. | **10** |
| **Total** | **75** |

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* [https://library.uniteddiversity.coop/Ecological\_Building/Strategies\_for\_Sustainable\_Arch](https://library.uniteddiversity.coop/Ecological_Building/Strategies_for_Sustainable_Architecture.pdf) [itecture.pdf](https://library.uniteddiversity.coop/Ecological_Building/Strategies_for_Sustainable_Architecture.pdf)
* [https://s3.ap-south-](https://s3.ap-south-1.amazonaws.com/aipnpc.org/downloads/T_5053_GENERAL_ASPECTS_OF_ENERGY_MANAGEMENT_AND_ENERGY_AUDIT.pdf) [1.amazonaws.com/aipnpc.org/downloads/T\_5053\_GENERAL\_ASPECTS\_OF\_ENERG](https://s3.ap-south-1.amazonaws.com/aipnpc.org/downloads/T_5053_GENERAL_ASPECTS_OF_ENERGY_MANAGEMENT_AND_ENERGY_AUDIT.pdf) [Y\_MANAGEMENT\_AND\_ENERGY\_AUDIT.pdf](https://s3.ap-south-1.amazonaws.com/aipnpc.org/downloads/T_5053_GENERAL_ASPECTS_OF_ENERGY_MANAGEMENT_AND_ENERGY_AUDIT.pdf)
* <https://www.grihaindia.org/sites/default/files/pdf/ECBC-Code.pdf>
* https:/[/www.hyderabadwater.gov.in/en/themes/HMWS/downloads/rainwaterharvesting.p](http://www.hyderabadwater.gov.in/en/themes/HMWS/downloads/rainwaterharvesting.p) df

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | S | S | M | M | W | S |
| **CO2** | S | S | M | M | W | S |
| **CO3** | S | S | M | W | M | S |
| **CO4** | S | S | M | M | M | S |
| **CO5** | S | S | M | M | M | S |

**CORE V**

**CC5 – TEXTILE SCIENCE**

 **Time/Hrs: Theory: 5 Hrs Year: I**

 **Credits: 4 Semester: II**

**LEARNING OBJECTIVES**

**To enable the students to**

1. Understand the processes of manufacture of textile fibers and yarns.
2. Become familiar with the types of yarns, their properties and usage.
3. Acquire a broad awareness of textile uses in home furnishings.

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Recall the basic concepts of classification and properties of textile fibers and describe the method of manufacture. | **K1, K2** |
| **CO2** | Classify the various types of yarn and summarize the steps of yarn manufacture. | **K2** |
| **CO3** | Illustrate the parts of a loom and weaving mechanism and categorize the different types of weaves. | **K2, K4** |
| **CO4** | Analyze the concepts of dyeing, printing and compile them according to their application, manufacture on the environment and utility. | **K5, K6** |
| **CO5** | Evaluate the impact of fabric finishes for home furnishings. | **K5** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

#  THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Fiber Study**Classification of textile fibers - natural and man-made fibers.Essential properties of textile fibers - primary and secondary properties. Manufacturing process and uses of natural fibers - cotton, jute, silk and wool. Manufacturing process and uses of synthetic fibers – polyester, rayon and nylon. | **15** |
| **UNIT II** | **Yarn Study**Definition of yarn, Steps involved in the processing of yarn. Classification of yarns:Based on length - Staple and Filament Yarns,Based on number of parts in a yarn - Simple yarns (simple, ply and doubled, cable) and Novelty yarns (slub, flake, spiral, ratine, boucle, knot and chenille)Based on Twist - S twist and Z twist | **15** |
| **UNIT III** | **Weaving**Definition of Warp and Weft. Parts of a loom. Basic weaving operations. Basic fabric weaves - Plain, Twill, Satin.Fancy Weaves - Jacquard, Leno, Double Cloth, Lappet, Swivel, Spot and Pile. | **10** |
| **UNIT IV** | **Dyeing and Printing** The definition of dyeing, difference between dyeing and printing. Classification of Dye - Natural and Synthetic. Methods of dyeing - Stock, Top, Yarn and Piece dyeing.Styles of printing - Direct - Block, Roller and Duplex printing, Discharge- Blotch, Photo and Resist printing - Tie and dye, Batik, Stencil and Screen printing. | **20** |
| **UNIT V** | **Fabric Finishes**: Definition of finishes, classification of finishes, types of finishes - scouring, bleaching, tentering, calendaring, sizing, mercerizing, napping and sanforizing. | **15** |
| **Total** | **75** |

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5. [Dr. Deepali Rastogi Dr. Chanchal Dr. Sheetal Chopra Dr. Chitra Arora](https://www.amazon.in/s/ref%3Ddp_byline_sr_book_1?ie=UTF8&field-author=Dr.+Deepali+Rastogi+Dr.+Chanchal+Dr.+Sheetal+Chopra+Dr.+Chitra+Arora&search-alias=stripbooks) (2016). Textile Science A Practical Manual, Elite Publishing

# E- LEARNING RESOURCES

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* <https://www.slideshare.net/namit129/lyocell-final-ppt-28-1013>?
* textilelearner.blogspot.com/2012/03/carbon-fiber-characteristicsproperties.html
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* [www.makeinindia.com/article/-/v/technical-textiles-a-bright-future](http://www.makeinindia.com/article/-/v/technical-textiles-a-bright-future)
* [www.technicaltextile.net](http://www.technicaltextile.net/) › Articles › Nonwovens
* [www.technicaltextile.net](http://www.technicaltextile.net/) › Articles › Sports Textiles

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | W | S | M | M | S | W |
| **CO2** | W | S | M | M | S | W |
| **CO3** | W | S | M | M | S | W |
| **CO4** | M | S | M | M | M | M |
| **CO5** | M | S | M | M | W | S |

**CORE VI**

**CC6 – FURNISHINGS IN INTERIORS (Practical)**

 **Time/Hrs: Practical: 5 Hrs Year: I**

 **Credits: 4 Semester: II**

**LEARNING OBJECTIVES**

**To enable the students to**

1. Learn the importance of furnishings in interiors.
2. Identify various types of furnishings, criteria for their selection and care.
3. Acquire awareness on the use of textiles in home furnishings.

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Recall the basic stitches and demonstrate the application of seams and fullness. | **K1, K2, K3** |
| **CO2** | Extend and apply the concepts of seams and fullness in different types of curtains and draperies. | **K1, K2, K3** |
| **CO3** | Understand the design and choose suitable methods of repair for soft floor coverings. | **K2, K3** |
| **CO4** | Categorize bedding and seating furnishings and design them aesthetically. |  **K2, K6** |
| **CO5** | Compile various accessory furnishings and select suitable textile embellishments. | **K2, K5** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

#  THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Introduction to Stitching**1. Basic Seams: Plain, Top stitched Seam, Lappet Seam.
2. Seam Finishes: Pinked, Overcast, Herringbone, and Edge Stitched Seam.
3. Introduction to Fullness

Pleats - Box, Inverted and Pinch pleats Gathers - Gathering by Hand and Machine.Prepare an album of samples of seams, seam finishes and fullness. | **10** |
| **UNIT II** | **Window Treatments**1. Types of Curtains: Glass, Tie-Backs, Café, Casement, Criss-cross, Tier and Sheer Curtains.
2. Types of Draperies: Panel, Valence, Cornice, Swags and Cascades. Application of suitable seams and fullness to construct any two types of

curtains and any two types of draperies**.** | **15** |
| **UNIT III** | **Soft floor Coverings**1. Carpets and Rugs, Accent and Spot Rugs. Rugs based on shapes and sizes.
2. Carpets based on construction - Woven and Non-woven.

Repair of Carpets and Rugs - Mending, Darning, Appliqué and Patchwork. | **20** |
| **UNIT IV** | **Bedding and Seating Furnishings**1. Bed linens, Pillow covers, Quilts, Slipcovers, Cushion covers and Upholstery.
2. Construction of Pillow Cover, Cushion Cover and Bolster
3. Decoration of Bedding and Seating Furnishings
4. Basic Hand Embroidery Stitches:

Outline stitches - Running, Back, Stem Looped Stitches: Chain, Blanket, Feather Knot Stitches: Bullion, FrenchFlat Stitches: Satin, Long and Short1. Traditional Embroidery:

Chikankari of Lucknow, Kanta of Bengal, Phulkari of Punjab, Kasuti of Karnataka and Kashida of KashmirApplication of Basic hand Embroidery stitches on pillow covers. Application of any one Traditional Embroidery on cushion covers orbolsters, tablecloth handkerchief bedspread shawl. | **15** |
| **UNIT V** | **Accessory Furnishings**a. Wall hangings, tablecloths, table runners, throw blankets, lamp covers, vases, tapestries and accent furniture.Visit Home Furnishing Centres and collect swatches of home furnishings.Prepare a catalogue using swatches of home furnishings. | **15** |
| **Total** | **75** |

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1. “Soft Furnishings Room by Room” (2000), Eaglemoss Publications Limited,United States.
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* [https://conservancy.umn.edu/bitstream/handle/11299/168709/mn\_2000\_eb\_264.pdf;s](https://conservancy.umn.edu/bitstream/handle/11299/168709/mn_2000_eb_264.pdf%3Bsequence%3D1) [equence=1](https://conservancy.umn.edu/bitstream/handle/11299/168709/mn_2000_eb_264.pdf%3Bsequence%3D1)
* <http://cepc.co.in/>
* [https://sites.create-](https://sites.create-cdn.net/sitefiles/20/6/6/206653/Making_an_overlap_cushion_cover._Colour_pics._July_2017.pdf) [cdn.net/sitefiles/20/6/6/206653/Making\_an\_overlap\_cushion\_cover.\_Colour\_pics.\_Ju](https://sites.create-cdn.net/sitefiles/20/6/6/206653/Making_an_overlap_cushion_cover._Colour_pics._July_2017.pdf) [ly\_2017.pdf](https://sites.create-cdn.net/sitefiles/20/6/6/206653/Making_an_overlap_cushion_cover._Colour_pics._July_2017.pdf)
* <https://catalogimages.wiley.com/images/db/pdf/9780470101490.excerpt.pdf>
* [https://www.momtastic.com/family/diy-for-moms/diy-for-home/104055-revamp-](https://www.momtastic.com/family/diy-for-moms/diy-for-home/104055-revamp-your-lamp-how-to-make-a-pretty-lampshade-cover/) [your-lamp-how-to-make-a-pretty-lampshade-cover/](https://www.momtastic.com/family/diy-for-moms/diy-for-home/104055-revamp-your-lamp-how-to-make-a-pretty-lampshade-cover/)

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | M | S | M | M | S | S |
| **CO2** | M | S | M | M | S | S |
| **CO3** | M | S | W | M | S | S |
| **CO4** | M | S | W | M | S | S |
| **CO5** | M | S | W | M | S | S |

**ELECTIVE COURSE III**

**EC3 – RESEARCH METHODOLOGY AND STATISTICS**

 **Time/Hrs: Theory: 3 Hrs, Practical: 2 Hrs Year: I**

 **Credits: 3 Semester: II**

**LEARNING OBJECTIVES**

**To enable the students to**

1. Understand the fundamental principles and techniques in Research Methodology
2. Get an overview of the methodologies used in research.
3. Apply statistical procedures to analyze numerical data and draw inferences.

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Understand Research and its characteristic features and explore the different types of research design. Analyze the research problems and formulate suitable Hypothesis. | **K1, K2, K4** |
| **CO2** | Analyze different sampling techniques and selecting the suitable sampling technique for data collection. | **K2, K4** |
| **CO3** | Identify methods of Data collection using scaling techniques and assessment of data. | **K1, K4** |
| **CO4** | Process and Analyze data through statistical analysis and SPSS software. | **K4** |
| **CO5** | Present research data in a scientific manner and understand the key elements of a research report. | **K1, K2** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

# THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Research:** Meaning of Research - objectives of Research – Characteristics of Research – Significance of Research. Types of research – Descriptive vs. Analytical, Applied vs. fundamental, Quantitative vs. Qualitative, Conceptual vs. Empirical, Exploratory research and Ex-post Facto research.**Research design:** Identification of Research problem, Variable: Dependent variable, independent variable, extraneous variable. Hypothesis - Definition, types - null and alternate hypothesis. | **20** |
| **UNIT II** | **Sampling design**: Definition of sample, types of sampling design- probability sampling- simple random, complex random, stratified sampling, multistage sampling and non- probability sampling - deliberate sampling, purposive sampling, convenience sampling and judgment sampling.  | **15** |
| **UNIT III** | **Methods of data collection** – Collection of Data - Preparation of tools for **data collection** –Primary Data - questionnaire, interview and observation.Secondary Data - 1. Published Sources 2. Unpublished Sources**Scaling technique** - Nominal, Ordinal, Interval and Ratio. **Processing of data** – Editing, coding, classification & tabulation. | **15** |
| **UNIT IV** | **Quantitative Analysis**- Basic Concept and Simple Sums in Measures of Central Tendency – Mean, Median & Mode. Measure of Dispersion - Standard Deviation. SPSS Interpretation of t – test – One sample, Independent, Paired t test, ANOVA, Chi – Square – Goodness of fit.  | **15** |
| **UNIT V** | **Basics of Report** **writing** **and presentation:** Significance of report writing, layout of research report, Types of report – technical and popular. Journal article, APA format reference. | **10** |
| **Total** | **75** |

**Practicals**

1. Create e- form for survey method.
2. Analysis: Cross Tabulation, Frequency, Mean, Median, Mode,
3. Graphical and diagrammatic representation of tables
4. Applicable Statistical Analysis Software-Literature Searching-PubMed
5. Data Analysis- Micro Soft Excel, SPSS, Plagiarism Checker – Turnitin, Scribbr reference Manager - Mendeley

# REFERENCES

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2. John W Creswell & David Creswell (2018) Research Design: Qualitative, Quantitative, and Mixed Methods Approaches Sage Publications
3. Kerlinger F. N. and Lee, H.B. (2000) Foundations of Behavioural Research 4th Ed. Harcourt College Publishers
4. Kothari, C. R. (2019) Research Methodology: Methods and Techniques 2nd Ed. New Age International Pvt Ltd, New Delhi.
5. Kumar R. (2005) Research Methodology: A Step by Step Guide for Beginners. Sage Publications, New Delhi.
6. R Paneerselvam (2014) Research Methodology, PHI learning

# E-LEARNING RESOURCES

* <https://southcampus.uok.edu.in/Files/Link/DownloadLink/RM%20U1%20P1.pdf>
* <https://ccsuniversity.ac.in/bridge-library/pdf/Research-Methodology-CR-Kothari.pdf>
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* [https://www.researchgate.net/publication/333015026\_Chapter\_3\_-](https://www.researchgate.net/publication/333015026_Chapter_3_-_Research_Methodology_and_Research_Method)
* [\_Research\_Methodology\_and\_Research\_Method](https://www.researchgate.net/publication/333015026_Chapter_3_-_Research_Methodology_and_Research_Method)

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | M | M | M | S | W | S |
| **CO2** | M | M | M | S | W | S |
| **CO3** | M | M | M | S | S | S |
| **CO4** | M | M | M | S | W | S |
| **CO5** | M | M | M | S | S | S |

**ELECTIVE IV**

**EC4 – ADVANCED GRAPHIC DESIGN**

 **Time/Hrs: Theory: 3 Hrs, Practical: 2 Hrs Year: I**

 **Credits: 3 Semester: II**

**LEARNING OBJECTIVES**

# To enable the students to

1. Acquire basic knowledge of drawing and sketching exercises.
2. Know and effectively use photography, calligraphy and typography in developing logos and poster designs.
3. Explore various social media and digital apps used in promoting brand names.

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Understand the concept of drawing and sketching and know the basic material and mediums used for sketching. | **K2, K3** |
| **CO2** | Create Logos and posters using graphic design. | **K3, K6** |
| **CO3** | Apply calligraphy and typography in developing graphic design. | **K3, K6** |
| **CO4** | Choose social media for brand promotion. | **K2** |
| **CO5** | Visualize interior design themes through digital apps. | **K5, K6** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

#  THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Drawing & sketching** – Meaning and concept, Materials - Different sketching techniques and drawing mediums - Pencil and its types, Charcoal, Pastels, types of Paints. Usage of different points of pencils, handling of pencils. Drawing sheets and its sizes. | **15** |
| **UNIT II** | **Graphic Design** - Introduction, Types - Booklets, Brochures, Posters. Roles and responsibilities of graphic designer. Logo Design - Definition and its importance, Types of Logos, Guidelines for creating logos. | **20** |
| **UNIT III** | **Photography** - Definition, Importance of photography in Graphic Design, Effective Ways of using Photography in graphic design. Calligraphy - Definition, Styles of calligraphy, Equipment used in calligraphy. Typography - Definition, Styles of fonts - Formal, Informal, Creative lettering. | **15** |
| **UNIT IV** | **Branding** - Concept, Importance of branding, Selection of Brand elements, Methods of Branding, Choosing social media for brand promotion. Packaging for products. | **15** |
| **UNIT V** | **Visualization -** Visualizing interior design themes and implementing them through digital apps. Ideation, Mood board - types - Digital and physical, Components of mood board. | **10** |
| **Total** | **75** |

 **PRACTICALS:**

1. Pencil exercises
2. Creation of logos, poster making.
3. Calligraphy and typography.
4. Designing Web page and creating designs using digital apps.
5. Creating mood boards, Swatch boards.

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5. Robert Philip Gordon (2016), “Integrated Drawing Techniques: Designing interiors with Hand Sketching”, Fairchild Books, ISBN-13: 978-1628923353
6. Stephanie Travis (2015), “Sketching for Architecture, Interior Design”, Laurence King Publishing, ISBN-13: 978-1780675640

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* Susie Hodge and Lan Sidaway (2019)t, “The Pencils, Papers and Erasers you need to start drawing”, <https://www.artsy.net/article/artsy-editorial-pencils-papers-erasers-start-drawing>
* Casey Schmidt, (2020), “5 Methods of Branding that could make all the difference”, <https://www.canto.com/blog/methods-of-branding/>
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* Farkas (2022), “Graphic Design- Principles of Web Deisgn”, [https://faculty.washington.edu/farkas/dfpubs/Farkas-Farkas-Graphic%20Design-](https://faculty.washington.edu/farkas/dfpubs/Farkas-Farkas-Graphic%20Design-Ch11Principles%20of%20Web%20Design.pdf) [Ch11Principles%20of%20Web%20Design.pdf](https://faculty.washington.edu/farkas/dfpubs/Farkas-Farkas-Graphic%20Design-Ch11Principles%20of%20Web%20Design.pdf)

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | W | M | W | S | S | W |
| **CO2** | M | M | M | S | S | W |
| **CO3** | M | M | M | S | S | W |
| **CO4** | M | M | W | S | S | W |
| **CO5** | S | M | W | S | S | M |

**SKILL ENHANCEMENT COURSE**

**SEC 2 - FLOWER ARRANGEMENT**

 **Time/Hrs: Theory: 3 Hrs Year: I**

 **Credits: 2 Semester: II**

**LEARNING OBJECTIVES**

# To enable the students to

1. Apply the design elements & principles in flower arrangement.
2. Gain an understanding on the importance of indoor plants.
3. Acquire knowledge on the setting of flower shops.

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Identify floral arrangements based on principles and elements of design | **K1, K2** |
| **CO2** | Classify flowering and ornamental plants. | **K1, K2** |
| **CO3** | Follow the steps in storing and handling of flowers to retain freshness | **K3** |
| **CO4** | Make different types of floral arrangements. | **K3, K6** |
| **CO5** | Explore possibilities of a career in the retail flower business | **K5** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

 **THEORY**

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | Significance of flower arranging as an art form. Introduction to different styles and traditions of floral design. Study of the role of flowers in various cultures and occasions. Design Elements, floral design requirements flowers and containers, stem holders, floral foam, wire mesh, sand and clay. | **10** |
| **UNIT II** | Flower arrangement – importance, steps, and containers, basic principles, basic shapes, types and styles. Ikebana - history, materials required, general rules and basic styles of Ikebana. | **10** |
| **UNIT III** | Dry arrangement – preservation of plant materials-foliage and flowers, prolonging the vase life of flowers, garland and other floral ornament-flower carpet, floral bouquets, buttonholes. | **10** |
| **UNIT IV** | Flower Selection and PreparationFactors to consider when selecting flowersTechniques for conditioning and preserving flowersCare and handling of different flower typesDesigning flower arrangements for special events | **10** |
| **UNIT V** | Types of flower shops; job opportunities in the retail flower shop, pricing strategies Selling in the shop – characteristics and delivering system Displays in the shop – purpose, categories of display – theme and product displays; designing display arrangement.  | **5** |
|  | **TOTAL** | **45** |

# REFERENCES:

1. Bose et al, (2011). Floriculture and Landscaping. Calcutta: Allied Publishers, India.
2. Randhawa, G.S. and Mukhopadhyay, A, (2000). Floriculture in India. Chennai: Allied Publishers Limited, India.
3. Larson, A, (2013), Introduction to floriculture, New York: Academic Press Publishers, London.
4. Singh,A.K and Sisodia, A, (2017), Textbook of Floriculture and Landscaping, New Delhi:
5. New India Publishing Agency, India.
6. Griner,C, (2011), Floriculture Designing and Merchandising, New Delhi: Oxford &amp; IBH - Publishing Company, India.
7. Kumar, N, (2010) Introduction to Horticulture, Nagarkoil: Rajalakshmi Publications, India.

# E - LEARNING RESOURCES

* + - * <http://www.megagriculture.gov.in/PUBLIC/floriculture_objectives.aspx>
			* <http://ncert.nic.in/vocational/pdf/kegr101.pdf>
			* <http://agritech.tnau.ac.in/horticulture/horti_Landscaping_freshflower.html>
			* <https://www.basicsofgardening.com/types-of-garden>
			* <https://www.designcad.com.au/wp/Docs/Landscape%20Design%20and%20CAD.pdf>

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | S | S | S | S | M | S |
| **CO2** | S | S | S | S | M | M |
| **CO3** | S | S | S | S | M | S |
| **CO4** | S | S | S | S | S | S |
| **CO5** | M | M | M | M | M | S |

**CORE VII**

**CC7 – AUTOCAD IN INTERIORS**

 **Time/Hrs: Theory: 5 Hrs Year: II**

 **Credits: 4 Semester: III**

**LEARNING OBJECTIVES**

# To enable the students to

1. Learn the skills of drafting 2D floor plans in CAD.
2. Develop knowledge towards the application of computer in designing exterior and interior of a building.
3. Understand the application of 3D Modeling there by upgrade their presentation skills in the design field.

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Summarize the benefits, configuration and working requirements of AutoCAD software. | **K1, K2** |
| **CO2** | Analyze various tools available for drawing and modifying. | **K2, K4** |
| **CO3** | Outline the importance of 3D Modeling in designing spaces. Analyse the features of the software for designing and drafting 2D designs.  | **K1, K3** |
| **CO4** | Create 3D models for residential and commercial buildings usingthe tools available. | **K3, K6** |
| **CO5** | Identify different materials and finishes available and utilize them as per the requirements and evaluate the camera settings for 3D views. | **K2, K5** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

# THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | Overview of AutoCAD – Purpose, Need, Uses and Applications. General commands – New, Open, Save, Save as, Close and Exit. AutoCAD screen components – Title bar, Menu bar, Standard tool bar, Object Properties tool bar, Draw toolbar, Modify tool bar, UCS, Layout tab, Command Window and Status bar. Working with Drawing Aids – Grid, Snap, Ortho, Osnap, Polar Tracking, Object Snap Tracking, Dynamic Input. | **10** |
| **UNIT II** | Draw tools – Line, Plane, Rectangle, Arc, Circle, Polygon, Ellipse and Spline, Text – Style, Mtext, Text edit and Layer concept. Modify tools – Erase, Copy, Move, Scale, Rotate, Mirror, Offset, Chamfer, Fillet, Trim, Extent, Stretch, Array, and Break, Object selection methods. | **15** |
| **UNIT III** | Dimensions – Linear, Align, Angular, Radius, Diameter, Baseline, Continue, Leader. Dimension edit, Dimension styles – Lines and Arrow tab, Fit tab, Primary Units, Alternate Units, Tolerances. To create and insert Blocks and Block edit. Hatch and Gradient. Applying Dimensions, Layers, Hatch and Gradient in 2D plans. | **10** |
| **UNIT IV** | Solid Model - Creating 3D solids using standard primitives like Box, Wedge, Cylinder, Sphere, Cone, Torus, and Pyramid. Boolean operations - Union, Subtract and Intersect. 3D Operations - Extrude, Loft, Revolve, Sweep. Create Door and Window openings, Furniture with complex shapes and designs using Boolean operations and 3D operations. | **15** |
| **UNIT V** | Materials – Flooring, Wall finishes, Fabric, Plastic and Metal. Create new materials from the existing material browser. Applying the materials to the different room interiors like Living room, Bedroom, Dining room, Study room and Kitchen. Setting Background image to 3D model. Camera tool – SettingCamera to create different views and walkthrough of the interiorand exterior of the building models | **10** |
|  | Practicals:Creating a 2D residential plan.Creating 3D furnitureCreating Interior views with material finishes | **15** |
| **Total** | **75** |

**REFERENCES**

* 1. Sandeep Dogra (2022). AutoCAD 2022: A Power Guide for Beginners and intermediate users, CADArtifex Publishers.
	2. CAD Folks (2020), AutoCAD 2021 Beginners Guide. Independently Published, ISBN: 9798634102023
	3. Yasser Shoukry and Jaiprakash Pandey (2020), Practical Autodesk AutoCAD 2021 and AutoCAD LT 2021, [Packt Publishing](https://www.google.co.in/search?hl=en&gbpv=1&dq=autocad+books+for+beginners&printsec=frontcover&q=inpublisher:%22Packt+Publishing%22&tbm=bks&sa=X&ved=2ahUKEwj4qpafy5f_AhXN4TgGHZaABa8QmxMoAHoECBkQAg), ISBN: 9781789803761, 1789803764
	4. Sham Tickoo, Anurag, (2013). AutoCAD 2013. Cad Soft Technologies, Dreamtech Press, New Delhi.
	5. Sham Tickoo, D.Saravanan, (2010). AutoCAD 2010. CADSoft Technologies, Dreamtech Press, New Delhi.
	6. David Frey, (2000). AutoCAD 2000.
	7. Gokulachari, (Second Edition, 2008). CAD in Civil Engineering Drawing Practice I.
	8. K.Venugopal, (Third Edition, 1998). Engineering Drawing with AutoCAD. New Age International (P) Limited.
	9. Ilangovan, (Sep 1999). Engineering Drawing with AutoCAD.

**E-LEARNING RESOURCES**

* www.cad-notes.com/autocad-articles/
* https://knowledge.autodesk.com
* www.cadforum.cz/cadforum\_en/default.asp
* www.archblocks.com
* http://www.mycadsite.com/tutorials/

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | W | W | W | W | S | S |
| **CO2** | M | M | M | M | S | M |
| **CO3** | M | M | M | M | S | M |
| **CO4** | M | M | M | M | S | M |
| **CO5** | S | S | S | S | S | S |

**CORE VIII**

**CC8 – COMMERCIAL INTERIORS**

 **Time/Hrs: Theory: 3 Hrs Practicals: 2 Hrs Year: II**

 **Credits: 4 Semester: III**

**LEARNING OBJECTIVES**

#  To enable the students to

1. Learn about the importance and application of principles of art for commercial purpose.
2. Understand the technical need and specialised features for commercial buildings.
3. Know the holistic approach in commercial architecture.

#  COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Outline the importance of commercial interior space design and analyze various materials used both in interior and exterior. | **K1, K2, K4** |
| **CO2** | Apply art in commercial space designing and planning based on various purposes. Create 3D miniature models for commercial buildings with suitable materials. | **K3, K6** |
| **CO3** | Understand the requirement of various technical services in commercial high-rise building. | **K1, K2** |
| **CO4** | Describe the need of specialized facilities for commercial building. | **K1, K2** |
| **CO5** | Discuss the holistic approach in commercial architecture. Outline the goals of designing commercial buildings. | **K2, K5** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

#  THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Introduction to commercial interior space design**Definition, Purpose, Importance of commercial interior design. Factors influencing the design of buildings – Type of Building, Location, Nature of Activity, Customers and Clients. Materials used in designing commercial interior spaces. | **15** |
| **UNIT II** | **Art in Commercial Space** – Planning space for various commercial requirements - Public space Vs Private Space, Designing Aesthetic and functional aspects in Mall, Restaurant, Coffee shops, Theatres, Bank, Airport, Hospital, Educational Institutions and Offices. | **15** |
| **UNIT III** | **Technical Services for Commercial Building** – Need of Technical Service, Selection of Suitable air conditioning, mechanical system - HVAC, Security system, Simple intrusion detection, Access control and Surveillance systems and communication system – EPABX, Wireless Intercom and Door Phone Intercom. | **15** |
| **UNIT IV** | **Specialized Facilities for** [**commercial buildings**](http://ecoursesonline.iasri.res.in/mod/page/view.php?id=119079)– Need of specialized facilities, Amenities - Elevator, Lift, Ramps, Basement Parking. Plumbing system – Aspects of plumbing system, Public Toilets, lighting, Emergency lighting staircase and evacuation routes. Building safety system – Fire Safety, Automatic Fire Sprinkler system, Fire Alarm and smoke alarm. | **15** |
| **UNIT V** | **Holistic Approach in Commercial Design.**Importance of Holistic design approach for commercial interiors. Designers and Steps in the design process. Goals of well-designed commercial interior – Healthy, Security and Safety, Comfort, Reliability, Flexibility, Brand Image and Equality. Design Issues – Accessible design, Facilities for operations and maintenance, Recent trends to support emerging technologies. | **15** |
| **Total** | **75** |

**PRACTICALS**

1. Collection of materials used for designing interior space.
2. Model making of commercial building.
3. Visit to shops to identify the eco-friendly materials and their cost in the market
4. Built a demo model on Rain water harvesting system
5. Prepare chart on the rating methods of government agencies

#  REFERENCES

* 1. Bonda P., Sosnowchik K., Sustainable commercial interiors, 2014, 2nd Edition, John Wiley and sons.
	2. Christine & Elizabeth, (2007) Designing commercial Interiors, 2nd Edition John Wiley and sons.
	3. Buildings Energy Efficient Lighting by David Nelson, AIA David Nelson & Associates, Last updated: 07-23-2010
	4. Mark karlen, James Benya, Lighting design basics, 2004, John wiley and sons Inc USA.
	5. Sangeet Sharma, Architectural Aesthetics, 2005, Abhishek publications, India.

# E- LEARNING RESOURCES

* <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=119114>
* <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=119115>
* <http://ecoursesonline.iasri.res.in/course/view.php?id=664>
* <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=119113>
* <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=119097>
* <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=119099>
* <https://www.jietdat.ac.in/blog/what-is-the-scope-of-interior-designing>
* <https://www.workdesign.com/2013/04/7-design-trends-for-commercial-interiors/>
* <https://study.com/academy/lesson/what-is-commercial-interior-design.html>
* <https://www.mooc-list.com/tags/water-supply>
* <https://www.mooc-list.com/tags/sanitation-policy>
* <https://core.ac.uk/download/pdf/83574285.pdf>

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | S | S | M | W | M | M |
| **CO2** | S | M | M | S | S | M |
| **CO3** | S | M | S | S | S | M |
| **CO4** | S | S | S | S | S | M |
| **CO5** | S | S | S | S | S | M |

**CORE IX**

**CC9 – 3D MODELLING IN DESIGN (Practical)**

 **Time/Hrs: Practical: 5 Hrs Year: II**

 **Credits: 4 Semester: III**

**LEARNING OBJECTIVES**

# To enable the students to

1. Understand the application of 3D Modeling & thereby upgrade their presentation skills in the design field.
2. Analyze the features of various tools in Google Sketchup for 3D Modeling
3. Create 3D views using Google Sketchup & Revit Software

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** |  Outline the importance of 3D Modeling in designing spaces.Analyse the features of different software’s available for 3D Modeling. | **K1, K4** |
| **CO2** | Interpret the user interface of Google Sketch up software. Examine the uses of tools available for creating 3D models.Create 3D models for residential or commercial buildings using the tools available. | **K2, K5, K6** |
| **CO3** | Identify different materials and finishes available and utilize them as per the requirements.Evaluate the light and camera settings for 3D views.Create rendered 3D views both interior and exterior spaces using Google Sketch up | **K3, K5, K6** |
| **CO4** | Outline the features of Revit software | **K1, K2** |
| **CO5** | Create 3D views of residential and commercial spaces using Revit | **K6** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

# PRACTICAL

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Concept of 3D Modeling**1. Need & purpose of 3D models and views in the design field.
2. Overview on different software’s & plugins used for 3D modeling - Google Sketchup, 3Ds Max, Revit, Vray.
 | **10** |
| **UNIT II** | **User Interface of Google Sketch up**1. Components of Google Sketchup screen
2. Basic tools - Rectangle, Circle, Select, Pencil, Push-pull, Groups,

 Components, Move, Array, Copy, Rotate, Offset & Paint bucket.1. Navigation tools - Zoom, Orbit, Pan
2. Creating the components of a building such as walls, doors, window

 openings, furniture’s using the available rooms | **20** |
| **UNIT III** | **Materials & Lighting**1. Creating and applying materials to the models created.
2. Exploring setting options in lights and camera tools.
3. Create rendered views by using Vray plugin
 | **15** |
| **UNIT IV** | **Overview of REVIT**1. User Interface of Revit
2. Starting a New project
3. Working with Grids, Levels & Project views
 | **10** |
| **UNIT V** | **3D Views using REVIT**1. Creating Building Components - Walls, Doors, Windows, Staircase, Floors, Roofs & Ceilings
2. Adding Room tags and Furniture
3. Apply Materials & lighting to 3D views
 | **20** |
| **Total** | **75** |

**REFERENCES**

1. [Aidan Chopra](https://www.amazon.in/Aidan-Chopra/e/B001JSJIS2/ref%3Ddp_byline_cont_book_1), SketchUp (2014) For Dummies, John Wiley & Sons
2. [Alexander C. Schreyer (2015),](https://www.amazon.in/s/ref%3Ddp_byline_sr_ebooks_1?ie=UTF8&field-author=Alexander%2BC.%2BSchreyer&text=Alexander%2BC.%2BSchreyer&sort=relevancerank&search-alias=digital-text) Architectural Design with SketchUp: 3D Modeling, Extensions, BIM, Rendering, Making, and Scripting 2nd Edition, Wiley Publishers.
3. [Daniel Tal,](https://www.amazon.in/Daniel-Tal/e/B0029CQZXS/ref%3Ddp_byline_cont_book_1) (2013) Rendering in SketchUp: From Modeling to Presentation for Architecture, Landscape Architecture, and Interior Design, Wiley Publishers.
4. Kelly L. Murdock, Autodesk 3ds Max (2020) Complete Reference Guide, SDC Publications
5. [Markus Kuhlo, (2013)](https://www.amazon.in/Markus-Kuhlo/e/B004PSEKKO/ref%3Ddp_byline_cont_ebooks_1) Architectural Rendering with 3ds Max and V-Ray: Photorealistic Visualization 1st Edition, Routledge Publishers.

# E- LEARNING RESOURCES

* [https://www.sketchup.com](https://www.sketchup.com/plans-and-pricing/sketchup-free)
* <https://vdoc.pub/download/building-blocks-of-sketchup-69si3ltjgke0>
* [https://www.bgsu.edu/content/dam/BGSU/libraries/documents/collab-lab/Sketchup-](https://www.bgsu.edu/content/dam/BGSU/libraries/documents/collab-lab/Sketchup-Tutorial.pdf) [Tutorial.pdf](https://www.bgsu.edu/content/dam/BGSU/libraries/documents/collab-lab/Sketchup-Tutorial.pdf)
* https:/[/www.academia.edu/31650716/Architectural\_Rendering\_with\_3ds\_Max\_and\_](http://www.academia.edu/31650716/Architectural_Rendering_with_3ds_Max_and_) V\_Ray
* [http://images.autodesk.com/adsk/files/3dsmax\_2010\_lighting\_rendering.pdf](https://www.sketchup.com/plans-and-pricing/sketchup-free)

#

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | S | W | W | S | S | W |
| **CO2** | S | W | W | S | S | W |
| **CO3** | S | S | W | S | S | M |
| **CO4** | S | W | W | S | S | W |
| **CO5** | S | W | W | S | S | S |

**ELECTIVE V**

**EC5 – VISUAL MERCHANDISING**

 **Time/Hrs: Theory: 5 Hrs Year: II**

 **Credits: 3 Semester: III**

# LEARNING OBJECTIVES

**To enable the students to**

1. Understand the concept of Visual Merchandising.
2. Analyse the display merchandising techniques used.
3. Analayse current trends and forecast future trends in merchandising.

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Understand Visual merchandising and retailing. | **K2** |
| **CO2** | Analyse the different types of display. | **K4** |
| **CO3** | Summarize the display merchandising techniques and apply the same in interiors and exteriors.  | **K2, K3** |
| **CO4** | Categorize Merchandise presentation.  | **K2, K4** |
| **CO5** | Propose and forecast trend. | **K5** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

# THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Fundamentals of Visual Merchandising -** Visual Merchandising - Introduction, Objectives, Techniques, Visual Merchandising at different stores- Apparel store, Furniture store, Gift store. Store exteriors - store signs, façade, banners, planters, signage and awnings. Elements of display. Product display –hierarchy of product display, Exhibition spaces – display for exhibition. | **15** |
| **UNIT II** | **Material exploration-** 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. | **15** |
| **UNIT III** | **Display Merchandising** - 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** | **Merchandise Presentation -** Meaning, Principles of Merchandise Presentation, Categories in Merchandise Presentation, Dominance Factor in Merchandise Presentation, Cross Merchandising. | **15** |
| **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). | **15** |
| **Total** | **75** |

**REFERENCES**

1. Tony Morgan (2021), Visual Merchandising. Window displays and In-store Experience, 4th edition. Laurence king publication. London
2. Levy, Michale & Barton A. Weitz (2009). Retailing Management. Tata Mc Graw Hill.
3. Ebster Clause, Garaus Marion (2015), Store Design and Visual Merchandising, Second Edition, Business Expert Press
4. Morgan Tony (2010), Window Display: New Visual Merchandising, Laurence King Publishing
5. Murugan (2018), Retail Marketing, Thakur Publication.
6. Pradhan Swapana (2009). Retailing Management. Tata Mc Graw Hill.
7. Swati Bhalla and Anurag S (2010). Visual Merchandising. Tata Mc Graw Hill.

# E- LEARNING RESOURCES

* [http://www.slideshare.net/dianhasan/iiscm-retail-innovation-seminar-jakartaapril-8-](http://www.slideshare.net/dianhasan/iiscm-retail-innovation-seminar-jakartaapril-8-2011) [2011](http://www.slideshare.net/dianhasan/iiscm-retail-innovation-seminar-jakartaapril-8-2011)
* [www.businessdictionary.com/definition/visual-merchandising.html](http://www.businessdictionary.com/definition/visual-merchandising.html)
* [www.managementstudyguide.com/visual-merchandising.html](http://www.managementstudyguide.com/visual-merchandising.html)
* [www.rmservicing.com/articles/what-is-visual-merchandising](http://www.rmservicing.com/articles/what-is-visual-merchandising)

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | M | M | W | S | S | M |
| **CO2** | M | M | W | S | S | M |
| **CO3** | M | M | W | S | S | M |
| **CO4** | M | M | W | S | S | M |
| **CO5** | M | M | M | S | S | M |

**CORE INDUSTRY MODULE**

**RENEWABLE ENERGY RESOURCES**

 **Time/Hrs: Theory: 4 Hrs Year: II**

 **Credits: 3 Semester: III**

**LEARNING OBJECTIVES**

# To enable the students to

**On successful completion of the course the student will be able to**

1. Know the various forms of renewable energy resources.
2. Understand the Indian and Global energy need and consumption scenario.
3. Identify the types of non-Conventional energy sources.
4. Recognize the modern techniques involved in harnessing renewable energy and its challenges.
5. Acquire skills in extracting and handling renewable energy.

# COURSE OUTCOME

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Understand the theory of energy sources and the need for renewable energy in the present scenario. | **K1, K2** |
| **CO2** | Appraise the new technological innovation and the efficiency of solarenergy applications and its working principles. | **K3, K5** |
| **CO3** | Analyze and adapt the significance of utilizing wastes into energy. | **K4, K6** |
| **CO4** | Evaluate the new venture of wind energy technologies and itsApplications | **K3, K5** |
| **CO5** | Compare and apply other forms of renewable energy, wave power,tidal power and geothermal principles, its applications. | **K3, K4** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

# THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Energy as a resource** - conventional and non- conventional sources, renewable /non-renewable energy, energy management, national efforts on energy conservation. Need and Consumption Scenario in Renewable Energy. Forecasts for Renewable Energy. Environmental Impacts of Energy Sources. | **10** |
| **UNIT II** | **Solar Energy**: Sun as a Source Energy – Solar Photovoltaic Technology and Principles – Application in Solar Water Heater - Solar Dryer – Solar Distillation (Still) – Solar Pumping Systems – Solar Air Conditioning and Refrigeration – Solar Cooker – Solar Green House. | **10** |
| **UNIT III** | **Bio Energy:** Introduction to Biomass – Biomass Resources - Conversion Technologies – Thermal Conversion – Chemical Conversion – Biochemical Conversion – Background of Biogas – Source and Composition – Types of Biogas Plants – Operational Factors of Biogas Plant – Extraction of Energy from Wastes. | **15** |
| **UNIT IV** | **Wind Energy**: Fundamentals of Wind Energy Conversion System (WECS) – Basic Components of Wind Power System – Types of Wind Turbines – Modes of Wind Power Generation – Stand Alone Mode – Backup Mode – Grid – connected mode. | **10** |
| **UNIT V** | **Other Renewable Energy Sources**: Geothermal Energy – Basic Concepts – Geothermal Resources – Benefits and Challenges – Applications of Geothermal Energy – Tidal and Wave Energy, Technologies, Turbines, Prospects and Constraints of Tidal and Wave Energy. | **15** |
| **Total** | **60** |

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* [https://mccoymart.com/post/solar-water-heater-working-types-and-](https://mccoymart.com/post/solar-water-heater-working-types-and-uses/#%3A~%3Atext%3DThe%20working%20principle%20of%20solar%2Cpassed%20to%20a%20water%20tank) [uses/#:~:text=The%20working%20principle%20of%20solar,passed%20to%20a%20w](https://mccoymart.com/post/solar-water-heater-working-types-and-uses/#%3A~%3Atext%3DThe%20working%20principle%20of%20solar%2Cpassed%20to%20a%20water%20tank) [ater%20tank](https://mccoymart.com/post/solar-water-heater-working-types-and-uses/#%3A~%3Atext%3DThe%20working%20principle%20of%20solar%2Cpassed%20to%20a%20water%20tank).
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# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | M | S | W | S | M | S |
| **CO2** | M | S | W | S | M | S |
| **CO3** | M | S | W | S | M | S |
| **CO4** | M | S | W | S | M | S |
| **CO5** | M | S | W | S | M | S |

**SKILL ENHANCEMENT COURSE**

**SEC 3 - RESEARCH WRITING & PRESENTATION**

 **Time/Hrs: Theory: 3 Hrs Year: II**

 **Credits: 2 Semester: III**

**LEARNING OBJECTIVES**

# To enable the students to

**On successful completion of the course the student will be able to**

1. Introduce the importance of critical inquiry as a way of gaining knowledge and adding to it through research.
2. Exposure to the various forms of research and research methodology processes.

#  COURSE OUTCOME

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Demonstrate an understanding of the purpose and significance of research. | **K2, K3** |
| **CO2** | Formulate clear and focused research questions that address specific gaps or areas of inquiry within a given field of study. | **K5, K6** |
| **CO3** | Develop well-structured and reliable data collection instruments, such as questionnaires, interview guides, and observation protocols. | **K4, K6** |
| **CO4** | Analyze and interpret research findings accurately, considering the research objectives and the data analysis results. | **K4, K5** |
| **CO5** | Write clear, concise, and coherent reports that effectively communicate the intended message. | **K1, K3** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

 **THEORY:**

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **UNDERSTANDING RESEARCH** Explore the purpose, significance and types of research, including qualitative, quantitative and mixed methods approaches. | **10** |
| **UNIT II** | **RESEARCH QUESTIONS**Formulate clear and focused research questions. Develop skills in conducting a thorough literature review. **Research Ethics**: Discuss the importance of ethical considerations in research, plagiarism avoidance and ensuring participant confidentiality. | **10** |
| **UNIT III** | **DATA COLLECTION**Methods of data collection- Primary sources: observation and recording, interviews structured and unstructured, questionnaire, open ended and close ended questions and the advantages of the sampling. Collecting data from secondary sources.  | **15** |
| **UNIT IV** | **DATA ANALYSIS AND INTERPRETATION****Data Analysis Techniques**: Learn quantitative and qualitative data analysis techniques.**Results Interpretation:** Develop skills in interpreting research findings and effectively communicating the significance and implications of the results. | **10** |
| **UNIT V** | **REPORT WRITING** **Writing Process**: Understand the stages of the writing process, including prewriting, drafting, revising and editing, to produce coherent and well-structured research.**Citation and Referencing:** Learn and apply appropriate citation styles, such as APA format. | **15** |
|  | **TOTAL** | **60** |

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* <https://ccsuniversity.ac.in/bridge-library/pdf/Research-Methodology-CR-Kothari.pdf>
* [https://www.researchgate.net/publication/303381524\_Fundamentals\_of\_research\_met](https://www.researchgate.net/publication/303381524_Fundamentals_of_research_methodology_and_data_collection) [hodology\_and\_data\_collection](https://www.researchgate.net/publication/303381524_Fundamentals_of_research_methodology_and_data_collection)
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# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | S | S | S | S | S | S |
| **CO2** | S | S | S | S | S | S |
| **CO3** | S | S | S | S | S | S |
| **CO4** | M | M | M | S | M | M |
| **CO5** | S | S | S | S | S | S |

**SOFT SKILL-3**

**AECC 3 - TRADITIONAL FOLK ART**

 **Time/Hrs: Theory: 2 Hrs Year: II**

 **Credits: 2 Semester: III**

**LEARNING OBJECTIVES**

# To enable the students to

**On successful completion of the course the student will be able to**

* + - 1. Identify and classify different traditional folk-art styles.
			2. Create designs using different medium.
			3. Understand the symbolism and themes in traditional folk art.
			4. Identify different types of floor decoration techniques and materials.

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#  COURSE OUTCOME

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Identify and appropriate different types of folk arts of the different States in India. | **K2, K3** |
| **CO2** | Practice different techniques, mediums and styles of folk art. | **K3** |
| **CO3** | Identify and differentiate various traditional painting styles. | **K2, K4** |
| **CO4** | Identify and understand various art mediums. | **K1, K2** |
| **CO5** | Understand the significance of metalwork in interior design. | **K2** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

**THEORY:**

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Introduction to Folk Art**Introduction to folk art and tribal art, Definition and characteristics of folk-art Different forms of folk art, famous folk-art traditions in India,  | **5** |
| **UNIT II** | **Mediums, Techniques & Materials**Exploration of materials used in different folk-art forms (e.g., wood, clay, textiles) - Types of mediums used in folk-art, Symbols & motifs in folk art | **10** |
| **UNIT III** | **Traditional Painting Styles**Mural painting, miniature painting, Madhubani Painting, Warli Painting, Kantha, Kalamkari, Phulkari. Study of iconic folk painting styles (e.g., Russian nesting dolls, Chinese brush painting). | **5** |
| **UNIT IV** | **Floor Decoration** Cultural significance and symbolism of floor decorations Study of different materials used in floor decoration (e.g., colored powders, flowers, rice, etc.) Introduction to various tools, brushes, stencils and instruments. Exploring different design elements (e.g., geometric patterns, motifs, symbols). Art of Rangoli, Alapana and Kolam. | **5** |
| **UNIT V** | **Metalwork in Interiors**Overview of metal working techniques in folk art (e.g., filigree, repousse) Creation of simple metal art pieces. | **5** |
| **Total** | **30** |

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2. Ghosh, D. P. (2011). Indian Folk Arts and Crafts. Abhinav Publications.
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# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | S | S | S | S | S | S |
| **CO2** | S | S | S | S | S | S |
| **CO3** | S | S | S | S | S | S |
| **CO4** | M | M | M | S | M | M |
| **CO5** | S | S | S | S | S | S |

|  |
| --- |
| **INTERNSHIP** |
| **Time/Hrs: 30 Hours** | **Year: II** |
| **Credits: 2** | **Semester: III** |

Students in the interior design program are required to participate in the department coordinated internship program with interior design firms that involves a minimum of 30 Days professional experience. At the conclusion of this experience students submit a final project that demonstrates their growth of knowledge and skills in the field of interior design.

**Objective:** The Internship is committed to preparing graduates in the M.Sc., Interior Design

and Décor Degree to join as entry level Designers with a strong foundation with professional experience.

# Expected Outcome of the Internship

 **On successful completion of the internship, the student:**

* Learns how interior design firm functions and the specific roles and responsibilities of a designer.
* Gains knowledge about industry/company process.
* Develops skills in 2D and 3D software.
* Analyse cost estimation of building materials and finishes.
* Learns the methods and strategies used in cost control.
* Develops managerial skills in the areas of managing works required by the client.
* Adapts to working in a team and contributes to needs as they arise.
* Demonstrates competency in professional presentation, communication and writing skills.

Internships will be permitted in the following areas:

1. Regional and National Interior design firms/Architecture firms.
2. Construction companies – Space planning
3. Manufacturing Sectors – Metal arts and crafts, Ceramic design, Interior decoration products.
4. Building Material and Finishes Companies.
5. Interior design specializations - Lighting design, Furniture design, cost estimation, specification writing, materials and product research, sustainable design, historic preservation, community development, facilities management, construction administration and culture-based design.
6. Related specializations - Model home design, kitchen and bath design, art representation, color specialist, architectural writing and publication and architectural photography.

**Evaluation**

Internship will be carried out during the summer vacation of the second semester and the report will be evaluated by the two examiners within the department.

|  |
| --- |
| **CORE 10** **CC10 – RESOURCE MANAGEMENT** |
| **Time/Hrs: Theory: 5 Hrs,** | **Year: II** |
| **Credits: 4** | **Semester: IV** |

**LEARNING OBJECTIVES**

# To enable the students to

1. Understand the Concepts, Significance and Principles of Resource Management.
2. Apply the skills in efficient use and management of time, energy and Money.
3. Understand Consumer behaviors, Problems and to learn the importance of consumer protection.

# COURSE OUTCOME

**On successful ccompletion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Identify and analyze the need for resources and apply decision making skills. | **K2, K3, K4** |
| **CO2** | Understand the role of resource and apply the same to prepare time plans. | **K2, K3, K6** |
| **CO3** | Apply work simplification techniques for efficient use of energy. | **K3** |
| **CO4** | Develop skills to prepare a budget within the available income and to maintain accounts. | **K1, K6** |
| **CO5** | Highlight the need of consumer protection by understanding and identifying the consumer behavior & problems. | **K1, K2** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

# THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Management Process** – Definition, concept, characteristics, Motivating factors in management – Values, Goals and Standards. Management process - Planning, Organizing, Controlling and Evaluation. **Decision making** - Meaning and its importance, Kinds of decisions, Steps in Decision making process, Factors affecting Decision making process, Methods of resolving conflicts. | **20** |
| **UNIT II** | **Resources** - Definition, Role of resource in management, Classification of resources, Factors affecting the use of resources, Maximizing the use of family resources, Conservation of resources.**Time management** – Definition, concept, Tools in time management - Peak loads, Work Curve and rest periods. Time management process – Steps in making time plans - Controlling the planning action - Evaluation. Time demands during different stages of the family life cycle.  | **15** |
| **UNIT III** | **Energy Management** - Energy requirements for household activities, Fatigue-concepts, Types - Physiological and Psychological fatigue, Remedies to overcome fatigue and Managerial process applied to energy. **Work Simplification** - Definition, Importance, Techniques – Formal and Informal Techniques - Mundel's Classes of change. | **15** |
| **UNIT IV** | **Money management** – Concept of Income, Sources and types of family income, Methods of supplementing family income, Steps in money management, Methods of handling money income, Budgeting, Steps in making budget, Controlling the use of income, Types of Records, Evaluation, Savings and its advantages. | **15** |
| **UNIT V** | **Consumer -** Definition, Role, Rights and Responsibilities, Consumer behavior, Consumer problems, Education and Empowerment. Consumer protection, consumer organization, cooperatives, alternative redressal, standardization, standard marks, quality control, buying aids, consumer legislation. | **10** |
| **Total** | **75** |

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* Consumer Education in Resource management, <https://www.nios.ac.in/media/documents/srsec321newE/321-E-Lesson-17.pdf>

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | M | W | W | S | M | S |
| **CO2** | M | W | W | S | M | S |
| **CO3** | M | W | W | S | M | S |
| **CO4** | M | W | W | S | M | S |
| **CO5** | M | W | W | S | M | S |

**CORE XI**

**CC11 – ERGONOMICS IN INTERIORS**

 **Time/Hrs: Theory: 5 Hrs Year: II**

 **Credits: 4 Semester: IV**

**LEARNING OBJECTIVES**

# To enable the students to

1. Become aware of the ergonomic principles for improving work efficiency.
2. Know the anthropometric dimension of workers and acquire practical knowledge in designing furniture.
3. Inculcate work efficiency using various work simplification techniques.
4. Know the importance of Healthy Buildings and plan an effective workplace.

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Describe the basic ergonomic principles and understand the need of the work environment in a place. | **K1, K2** |
| **CO2** | Understand the anthropometric dimension of humans and analyze spatial requirements. | **K2, K4** |
| **CO3** | Critically evaluate the environmental factors affecting human beings such as light, sound, noise, climate and vibrations. | **K2, K5** |
| **CO4** | Outline the importance of body mechanics. Demonstrate application of work simplification techniques effectively. | **K2, K3, K4** |
| **CO5** | Discuss the need for ergonomics in buildings, analyze the issues and appraise the importance of Healthy Building. | **K2, K4, K5** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

# THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Ergonomics**1. Ergonomics - significance, scope, man, machine, environment relationship, factors affecting physiological cost of work, body mechanics, functional design of workplace, time and motion study, energy studies.
2. Concept of work, workplace and work environment – designing work areas based on ergonomic principles and workers.
3. Factors influencing the Work environment – Location, space, comfort and discomfort, indoor and outdoor climate, furniture, lighting and ventilation, flooring and noise.
 | **15** |
| **UNIT II** | **Anthropometry Spatial requirement**1. Definition, Type of data – Structural and Functional, Anthropometric measurements – Head circumference, Height, Weight IBW and BMI.
2. Work heights when seated and standing - Stature, Eye Height, Elbow height, Elbow Rest Height, Knee height, Popliteal Height, normal and maximum reach, vertical and horizontal reach.
3. Anthropometric consideration in furniture designing.
 | **15** |
| **UNIT III** | **Environmental factors**1. Lighting - Adequacy of lighting at workplace, physiological requirement, psychological effect of lighting and the work efficiency of the worker.
2. Noise - Definition, sources of noise, indoor and outdoor noise level, effects of noise on psychological and intellectual activities, measurement of noise.
3. Temperature - air movements, humidity, exchange of heat between

human body and surroundings. | **15** |
| **UNIT IV** | **Improving Product design and work efficiency**1. Product design - design thinking process, diffusion and innovation, design communication, ergonomic considerations.
2. Body Mechanism - effective use of body mechanics, posture in House work, Good Posture and Bad Posture.
 | **15** |
| **UNIT V** | **Ergonomics in public building**1. Importance of Healthy Building and Ergo Issues.
2. Elements of Ergonomic Consideration in Building Interiors – Good Space Planning, Circulation and Access.
3. Well Planned ergonomic workplace and furniture for Old Age and Physically Challenged persons, to prevent Work-Related Musculoskeletal Disorder (WMSD) and Prevent Occupational Injuries and Illnesses
 | **15** |
| **Total** | **75** |

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3. [Jan Dul, Bernard Weerdmeester](https://www.routledge.com/search?author=Jan%20Dul) (2008), Ergonomics for Beginners, A Quick Reference Guide, Third Edition, CRC Press, ISBN 9780367242145
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6. Robert Bridger, (2018), Introduction to Human Factors and Ergonomics, 4th Edition, CRC Press, ISBN 9781138582897
7. Stephen Pheasant (2005), Body Space: Anthropometry, Ergonomics and the Design of Work, Third Edition Hard Cover - Illustrated. CRC Press;
8. Theresa Stack, [Lee T. Ostrom,](https://www.wiley.com/en-us/search?pq=%7Crelevance%7Cauthor%3ALee%2BT.%2BOstrom) [Cheryl A. Wilhelmsen,](https://www.wiley.com/en-us/search?pq=%7Crelevance%7Cauthor%3ACheryl%2BA.%2BWilhelmsen) (2016), Occupational Ergonomics: A Practical Approach, ISBN: 978-1-118-81421-5, Wiley

# E-LEARNING RESOURCES

* [https://onlinecourses.nptel.ac.in/noc20\_me11/preview.](https://onlinecourses.nptel.ac.in/noc20_me11/preview)
* <https://study.com/learn/lesson/anthropometric-measurements-purpose.html>
* [https://ftp.idu.ac.id/wp-](https://ftp.idu.ac.id/wp-content/uploads/ebook/ip/BUKU%20ERGONOMI/BUKU%20INGGRIS/Ergonomics%20For%20Beginners.pdf) [content/uploads/ebook/ip/BUKU%20ERGONOMI/BUKU%20INGGRIS/Ergonomics](https://ftp.idu.ac.id/wp-content/uploads/ebook/ip/BUKU%20ERGONOMI/BUKU%20INGGRIS/Ergonomics%20For%20Beginners.pdf) [%20For%20Beginners.pdf](https://ftp.idu.ac.id/wp-content/uploads/ebook/ip/BUKU%20ERGONOMI/BUKU%20INGGRIS/Ergonomics%20For%20Beginners.pdf)
* <https://www.youtube.com/watch?v=Hf5b_Ad5biM>

#

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | M | M | S | M | M | M |
| **CO2** | M | M | S | M | M | M |
| **CO3** | M | M | S | M | M | M |
| **CO4** | M | M | S | S | M | S |
| **CO5** | M | M | S | S | M | S |

**CORE XII**

**CC12 – PROFESSIONAL PRACTICE IN INTERIORS**

 **Time/Hrs: Practical: 5 Hrs Year: II**

 **Credits: 4 Semester: IV**

**LEARNING OBJECTIVES**

# To enable the students to

1. Understand the client requirements in a project.
2. Estimate and prepare the bill of quantities as per the budget requirements.
3. Design their own portfolio in finding a professional job

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Describe the need and purpose of professional practice in Interior Designfield. Understand the ethical standards to be followed by designers. | **K1, K2** |
| **CO2** | Analyze the client needs, their budget and design preferences in a projectBuild a sense of trust with the clients for smooth execution of the project. | **K4, K6** |
| **CO3** | Examine the process of Project management Construct a schedule for design projects. | **K5, K6** |
| **CO4** | Evaluate the cost required for materials and construction work andthereby create a budget for a project. | **K4, K5, K6** |
| **CO5** | Understand the importance of design portfolio in career. Create a designportfolio. | **K2, K6** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

 **THEORY**

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Interior Design as a Profession**1. Definition, concept and need of studying professional practice in Interior Design, Site management for professional Interior Design.
2. Ethical standards and professional ethics to be followed in the design field.
 | **10** |
| **UNIT II** | **Building Client Relationships**1. Understanding the clients’ needs, their demographics details and decision-making process.
2. Managing customer expectations, bringing value to clients through design and creating a good impression with them.
3. Study the scope of the project, budget of the client and their design preferences.
 | **20** |
| **UNIT III** | **The Project Management Process**1. Definition of project management process and the role of designers.
2. Phases of Interior Design project, stakeholders and building information modeling (BIM)
3. Preparing schedule and budget for design project
 | **15** |
| **UNIT IV** | **Trade sources & Rate Analysis**1. Field visits to shops, manufacturers and traders to identify the materials available, its cost, estimation regarding interior works like carpentry, paneling and thereby preparing the budget for the project
2. 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. Electrical & plumbing products, wiring, ducting etc., and laying of tiles & wall paneling in the estimated format of the project.
3. Preparing a detailed report.
 | **20** |
| **UNIT V** | **Portfolio Review**1. Definition, concept, Types - showcase or presentation of Portfolio: A collection of best work.
2. Process or Learning Portfolio: A work in progress.
3. Assessment of Portfolio: used for accountability.
4. A Hybrid Approach.
 | **10** |
| **Total** | **75** |

**REFERENCES**

1. [Christine M. Piotrowski](https://www.wiley.com/en-us/search?pq=%7Crelevance%7Cauthor%3AChristine%2BM.%2BPiotrowski) (2020), Professional Practice for Interior Designers, 6th Edition, Wiley Publishers
2. [Harold Linton](https://www.bloomsbury.com/in/author/harold-linton/) (2017), [William Engel,](https://www.bloomsbury.com/in/author/william-engel/) Portfolio Design for Interiors, Bloomsbury Publishing
3. [Katherine E. Kennon](https://www.amazon.in/Katherine-E-Kennon/e/B00JGSGTX4/ref%3Ddp_byline_cont_book_1) (2018), The Codes Guidebook for Interiors, Wiley Publishers
4. [Roderick Adams](https://www.routledge.com/search?author=Roderick%20Adams) (2012), Interior Design, A Global Profession, Routledge Publishers
5. [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)

# E- LEARNING RESOURCES

* [https://download.e-bookshelf.de/download/0000/8043/23/L-G-0000804323-](https://download.e-bookshelf.de/download/0000/8043/23/L-G-0000804323-0002445319.pdf) [0002445319.pdf](https://download.e-bookshelf.de/download/0000/8043/23/L-G-0000804323-0002445319.pdf)
* [https://www.academia.edu/36218043/Interior\_Design\_Handbook\_of\_Professional\_Pr](https://www.academia.edu/36218043/Interior_Design_Handbook_of_Professional_Practice) [actice](https://www.academia.edu/36218043/Interior_Design_Handbook_of_Professional_Practice)
* <https://eopcw.com/find/downloadFiles/365>
* <https://blog.upskillist.com/how-to-create-a-graphic-design-portfolio/>
* https:/[/www.docfly.com/blog/2021/how-to-create-a-pdf-graphic-design-portfolio-](http://www.docfly.com/blog/2021/how-to-create-a-pdf-graphic-design-portfolio-) step-by-step-guide

#

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | W | W | M | S | S | M |
| **CO2** | M | M | M | S | S | M |
| **CO3** | W | W | M | S | S | M |
| **CO4** | M | M | M | S | S | M |
| **CO5** | M | W | M | S | S | M |

**ELECTIVE VI**

**EC6 – PERSPECTIVES OF HOME SCIENCE**

 **Time/Hrs: Theory: 5 Hrs Year: II**

 **Credits: 3 Semester: IV**

**LEARNING OBJECTIVES**

# To enable the students to

1. Understand the concepts of Home Science and extension education.
2. Develop a conceptual understanding in the field of human development.
3. Recognize the food groups and choose appropriate foods for different age groups and disease conditions.
4. Know the communication models.
5. Be prepared to face UGC- NET, SLET examinations in Home Science

# COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Compare and analyze the nutrient value of foods and prepare menu plans for different age groups. | **K2, K4, K6** |
| **CO2** | Plan nutritional care for people with nutritional deficiencies, involved in sports, and at times of emergency and disasters. | **K1, K2, K6** |
| **CO3** | List the principles of growth and development and realize the importance of mastering developmental tasks at each life stage. | **K1, K2, K3** |
| **CO4** | Understand the concept, theories and models of communication | **K1, K2** |
| **CO5** | Understand the principles of extension education and analyze the qualities of extension worker. | **K2, K4** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

#  THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** |  **CONTENT** | **HOURS** |
| **UNIT I** | **Food science**Food groups – balanced diet, food pyramid, macro and micro nutrition. Effects of cooking and processing techniques on nutritional components and other physical parameters, food preservation and application.Perspectives of food service-menu planning, food cost analysis. | **15** |
| **UNIT II** | **Nutrition and Dietetics**Nutrients-role of nutrients in the body, nutrient deficiencies and requirements for Indians.Nutrition through life span-physiological changes, nutritional needs and dietary guidelines for adequate nutrition through life cycle.Community nutrition, sports nutrition, Menu planning – Meaning, Factors considered in preparation of menu plan, Menu plan for all age groups. | **15** |
| **UNIT III** | **Human Development**Principles of growth and development.Early& Late childhood care and education – activities to promote holistic development. Influence of family, peers, school, community and culture on personality development. Adolescence and youth: changes, challenges and problemsAging-physical and psychological changes and care needs. | **20** |
| **UNIT IV** | **Communication for development:**Basics of communication- characteristics, functions, process, models, barriers, perception, persuasion and empathy, types of communication, process of listening. | **15** |
| **UNIT V** | **Extension Education**Meaning, Definition, objectives, characteristics, principles, Extension teaching methods - types and methods qualities of a good Extension Worker. Communication, Innovation and Social change. | **10** |
| **TOTAL** | **75** |

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* 1. [Anshika Srivastava Dr. Manju Yadav, Dr. Barbhai Mrunal D](https://www.amazon.in/s/ref%3Ddp_byline_sr_book_1?ie=UTF8&field-author=Anshika%2BSrivastava%2BDr.%2BManju%2BYadav%2C%2BDr.%2BBarbhai%2BMrunal%2BD.&search-alias=stripbooks) (2020) A Competitive Book of Home Science and Community Science, Jain brothers
	2. Balda and Shanti; Verma and Deepak Kumar; Prabhakar P K (2015) Objective Home Science At A Glance Scientific Publishers
	3. Premalata Mullick (2012), Textbook of Home Science, Kalyani Publishers.
	4. UGC NET Home Science (2021) Arihant Publication.
	5. UGC NET study Manual (2013) S S book publishers

# E-LEARNING RESOURCES

* <https://www.kopykitab.com/blog/ugc-net-home-science/>
* <https://www.flexiprep.com/NIOS-Notes/Senior-Secondary/Home-Science/NIOS-Home-Family-and-Home-Science-Ch-14-Stages-of-the-Life-Span-Growth-and-Cognitive-Development.html>

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | W | W | W | S | M | M |
| **CO2** | W | W | W | S | M | M |
| **CO3** | W | W | W | S | M | M |
| **CO4** | W | W | W | S | M | M |
| **CO5** | W | W | W | S | M | M |

**CORE XIII**

**CC13 – PROJECT WITH VIVA VOCE**

 **Time/Hrs: Theory: 4 Hrs Year: II**

 **Credits: 3 Semester: IV**

**LEARNING OBJECTIVES**

**To enable the students to**

1. Develop skills in conducting research study.
2. Learn the art and science of preparing and presenting a research document.

#  COURSE OUTCOMES

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Develop a research design on a topic relevant to their field | **K2, K5, K6** |
| **CO2** | Prepare a systematic literature review on the topic selected | **K2, K6** |
| **CO3** | Select and execute the most appropriate methodology for the study and provide justification for the choice made. | **K2, K3** |
| **CO4** | Acquire skill in collecting, analyzing, presenting and interpreting data accurately. | **K1, K2, K3** |
| **CO5** | Present findings of the study in a logical and sequential manner and discuss them against a backdrop of available scientific literature; Cite references in prescribed format and conduct plagiarism check on the document prepared. | **K2, K3** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

 **On successful completion of the course, the student will be able to:**

# COURSE OUTLINE:

The structure of the dissertation includes

 Unit1: Introduction

Unit 2: Review of Literature

 Unit 3: Methodology

Unit 4: Results and Discussion

Unit 5: Summary and Conclusion, Bibliography

**MAPPING OF COs WITH PSOs**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | S | S | S | S | S | S |
| **CO2** | S | S | S | S | S | S |
| **CO3** | S | S | S | S | S | S |
| **CO4** | S | S | S | S | S | S |
| **CO5** | S | S | S | S | S | S |

**SOFT SKILL-4**

**AECC 4 - STYLES IN INTERIORS**

 **Time/Hrs: Theory: 2 Hrs Year: II**

 **Credits: 2 Semester: IV**

**LEARNING OBJECTIVES**

# To enable the students to

* 1. Understand the needs of styles in interiors in various aspects.
	2. Develop a conceptual understanding in the Interior Design field.
	3. Familiarize the different smart home devices used in interiors for better environment.
	4. Obtain a conceptual framework of Event Management.

#

#  COURSE OUTCOME

**On successful completion of the course the student will be able to**

|  |  |  |
| --- | --- | --- |
| **CO** | **CO STATEMENT** | **K LEVEL** |
| **CO1** | Outline the importance of interior styles and analyse various aesthetics based on themes, design and colour. | **K1, K2, K4** |
| **CO2** | Compare and Summarize the different classic and modern styles in interiors. | **K2, K4** |
| **CO3** | Understand the styling steps in interior rooms | **K2** |
| **CO4** | Adapt styles to transcend from traditional to modern smart homes | **K3, K6** |
| **CO5** | Manage and Organize events for various occasions efficiently. | **K3, K4** |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create |

# THEORY

|  |  |  |
| --- | --- | --- |
| **UNIT** | **CONTENT** | **HOURS** |
| **UNIT I** | **Intangibles of Design -** Authenticity, Juxtaposition & Luxury. Styles based on Design – Formal, Informal and Free styles.Theme based on Colour – Warm and Cool, Monotone, Complementary, Split Complementary, Triad and tetrad. | **5** |
| **UNIT II** | **Modern styles** - Luxury, Minimalist, Scandinavian, Shabby Chic,Industrial, Farmhouse, Coastal and Transitional. | **5** |
| **UNIT III** | **Styling of a House -** Individual House - Bungalow/Duplex, Twin House and Prefabricated House. Flats - Importance of Amenities in gated Community, Expressiveness and Functionality of residential building. | **10** |
| **UNIT IV** | **Smart Interiors -** Concept of smart home, Characteristics of smart home, smart home Communication System - Smart home devices (Alexa, Google Assistant and Smart Switches) - Smart speaker, Smart TV, Smart light, Doorbells, Voice Assistants and Robot Vacuums - Pros and cons. | **5** |
| **UNIT V** | **Elegance of Events** – Styles in DecoratingPersonal Events - Birthday Party, Wedding, Baby showers and themed celebrations.Leisure Events - Get together, Festival, Stage Show and Sports.Corporate Events - Conference, Exhibition, Product or Service launch. | **5** |
| **Total** | **30** |

**REFERENCES**

1. Annie Stephen Hariharan (2015), Principles of event management, Himalaya Publishing House, Mumbai.
2. Emily Henderson (2015), Styled: Secrets for Arranging Rooms, from Tabletops to Bookshelves. Random House LLC
3. Lauren Liess (2015), “Habitat: The Field Guide to Decorating” Abrams, New York.
4. Marlon Buchanan, (2020) “The Smart Home Manual: How To Automate Your Home To Keep Your Family Entertained, Comfortable, And Safe” Paperback.
5. Nick Vandome (2018), Smart Homes in easy steps: Master smart technology for your home, Paperback - Import

# E- LEARNING RESOURCES

* <https://www.thespruce.com/modern-architecture-4797910>
* <https://www.2020spaces.com/blog-interior-design-styles/>
* <https://foyr.com/learn/types-of-interior-design-styles/>
* <https://www.investopedia.com/terms/s/smart-home.asp>
* <https://www.techtarget.com/iotagenda/definition/smart-home-or-building>
* <https://www.decorilla.com/online-decorating/interior-design-styles-101/>
* <https://www.decoraid.com/blog/interior-design-styles-definition-2019/>

# MAPPING OF COs WITH PSOs

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CO/PSO** | **PSO1** | **PSO2** | **PSO3** | **PSO4** | **PSO5** | **PSO6** |
| **CO1** | S | M | S | M | M | M |
| **CO2** | S | M | S | M | M | M |
| **CO3** | S | M | S | M | M | M |
| **CO4** | S | M | S | M | M | S |
| **CO5** | S | M | S | M | M | S |