# BACHELOR OF DESIGN (B. DES)
# INTERIOR DESIGN (IN)

## SCHEME OF EXAMINATION

**[1st to 8th Semester]**

**&**

## SYLLABUS

**[1st to 8th Semester]**

**Offered by**

## University School of Design and Innovation

**BATCH 2024 onwards**

GURU GOBIND SINGH
INDRAPRASTHA
UNIVERSITY

**Guru Gobind Singh Indraprastha University**
**East Delhi Campus, SurajmalVihar,**
**Delhi – 110092 [India]**
**www.ipu.ac.in**

**EVALUATION SCHEME FOR BATCH 2024 ONWARDS:**

| | Marking Scheme | Practical Subjects | Theory Subjects |
|---|---|---|---|
| i. | Continuous evaluation by teachers | 40% | 40% |
| ii. | Semester Term-End Examination | 60% | 60% |

## FIRST SEMESTER

| Group | Paper Number | Paper | Lecture (L)/ Tutorial (T) | Studio (S)/ Practical (P) | Credits | Status |
|---|---|---|---|---|---|---|
| | **PRACTICAL/ STUDIO SUBJECTS** | | | | | |
| **PC** | **DIF 101** | **Design Studio-I** | | 6 | **6** | **M** |
| **PC** | **DIF 103** | **Elements and Principles of Design** | | 6 | **6** | **M** |
| **PC** | **DIF 105** | **Representation Techniques & Design Fundamentals** | | 4 | **4** | **M** |
| **SEC** | **DIF 107** | **Computer Graphics-I** | | 3 | **3** | **M** |
| **SEC** | **DIF 109** | **Geometrical Construction** | | 3 | **3** | **M** |
| | **LECTURE/ THEORY SUBJECTS** | | | | | |
| **AEC** | **DIF 111** | **Communication Skills** | 2 | | **2** | **M** |
| **AEC** | **DIF 113** | **Environmental Studies** | 2 | | **2** | **M** |
| | | **Total** | **4** | **22** | **26** | |

## SECOND SEMESTER

| Group | Paper Number | Paper | Lecture (L)/ Tutorial (T) | Studio (S)/ Practical (P) | Credits | Status |
|---|---|---|---|---|---|---|
| | **PRACTICAL/ STUDIO SUBJECTS** | | | | | |
| **PC** | **DIF 102** | **Design Studio-II** | | 6 | **6** | **M** |
| **PC** | **DIF 104** | **3DVisualization and Illustration** | | 4 | **4** | **M** |
| **SEC** | **DIF 106** | **Computer Graphics-II** | | 3 | **3** | **M** |
| **SEC** | **DIF 108** | **Typography Fundamentals** | | 3 | **3** | |
| **SEC** | **DIF 110** | **Makers Lab*** | | 4 | **4** | |
| | **LECTURE/ THEORY SUBJECTS** | | | | | |
| **PC** | **DIF 112** | **Universal Design** | 2 | | **2** | |
| **PC** | **DIF 114** | **Communication Studies and Semiotics** | 2 | | **2** | |
| **AEC** | **DIF 116** | **Constitution of India** | 2 | | **2** | **M** |
| | | **Total** | **6** | **20** | **26** | |

** **NUES** Non University Exam Subject, Comprehensive evaluation by the concerned teacher, out of 100, as per detailed syllabus*

***Note: PC**: Program Core, **ES**: Engineering Science, **SEC**: Skill Enhancement Course, **PCE**: Program Core Elective, **OAE**: Open Area Elective, **AEC:** Ability Enhancement Course*

## THIRD SEMESTER

| Group | Paper Number | Paper | Lecture (L)/ Tutorial (T) | Studio (S)/ Practical (P) | Credits | Status |
|---|---|---|---|---|---|---|
| | **PRACTICAL/ STUDIO SUBJECTS** | | | | | |
| **PC** | **DIN 201** | **Interior Design Project-I** | | 6 | **6** | **M** |
| **EC** | **DIN 203** | **Interior Material -I** | 2 | 4 | **6** | **M** |
| **SEC** | **DIN 205** | **Digital Modelling in Interiors-I** | | 4 | **4** | **M** |
| **PC** | **DIN 207** | **Spatial Planning and Ergonomics** | | 3 | **3** | **M** |
| **PC** | **DIN 209** | **Fundamentals of Interior Graphics** | | 3 | **3** | |
| | **LECTURE/ THEORY SUBJECTS** | | | | | |
| **PC** | **DIN 211** | **Social and Cultural Factors in Design** | 2 | | **2** | |
| **PC** | **DIN 213** | **History of Interior Design-I** | 2 | | **2** | |
| | | **Total** | **6** | **20** | **26** | |

## FOURTH SEMESTER

| Group | Paper Number | Paper | Lecture (L)/ Tutorial (T) | Studio (S)/ Practical (P) | Credits | Status |
|---|---|---|---|---|---|---|
| | **PRACTICAL/ STUDIO SUBJECTS** | | | | | |
| **PC** | **DIN 202** | **Interior Design Project-II** | | 8 | **8** | **M** |
| **EC** | **DIN 204** | **Interior Material -II** | 2 | 4 | **6** | **M** |
| **SEC** | **DIN 206** | **Digital Modelling in Interiors-II** | | 4 | **4** | **M** |
| **SEC** | **DIN 208** | **Furniture Design and Prototyping*** | | 4 | **4** | |
| | **LECTURE/ THEORY SUBJECTS** | | | | | |
| **PC** | **DIN 210** | **Integration of Services in Interiors-I** | 2 | | **2** | **M** |
| **PC** | **DIN 212** | **Color Context in Interior Spaces** | 2 | | **2** | |
| | | **Total** | **6** | **20** | **26** | |

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## FIFTH SEMESTER

| Group | Paper Number | Paper | Lecture (L)/ Tutorial (T) | Studio (S)/ Practical (P) | Credits | Status |
|---|---|---|---|---|---|---|
| | **PRACTICAL/ STUDIO SUBJECTS** | | | | | |
| **PC** | **DIN 301** | **Interior Design Project-III** | | 10 | **10** | **M** |
| **EC** | **DIN 303** | **Interior Material -III** | | 6 | **6** | **M** |
| **SEC** | **DIN 305** | **Advanced Interior Rendering & Software Application** | | 4 | **4** | **M** |
| | **LECTURE/ THEORY SUBJECTS** | | | | | |
| **PC** | **DIN 307** | **Interior Décor and Surface Finishes** | 2 | | **2** | |
| **PC** | **DIN 309** | **Introduction to Lighting and Acoustics** | 2 | | **2** | |
| **PCE** | **As per the PCE list** | **One PCE (Program core Elective) from the PCE List as per the decision of APC (Academic Program Committee)** | 2 | | **2** | |
| | | **Total** | **6** | **20** | **26** | |

## Program Core Electives (PCE) List for Semester 5*

| Paper No. | Paper Title | Lecture (L)/Tutorial (T) | Studio (S)/ Practical (P) | Credits | Status |
|---|---|---|---|---|---|
| **DIN 311** | **Basics of Vastu Shastra for Interiors** | 2 | - | 2 | |
| **DIN 313** | **Inclusive Interiors** | 2 | - | 2 | |
| **DIN 315** | **Sustainable Interiors** | 2 | - | 2 | |

*Program Core Electives (PCE) can be augmented as per the industry/academic requirements.

***Note: PC**: Program Core, **ES**: Engineering Science, **SEC**: Skill Enhancement Course, **PCE**: Program Core Elective, **OAE**: Open Area Elective, **AEC:** Ability Enhancement Course*

## SIXTH SEMESTER

| Group | Paper Number | Paper | Lecture (L)/ Tutorial (T) | Studio (S)/ Practical (P) | Credits | Status |
|---|---|---|---|---|---|---|
| | **PRACTICAL/ STUDIO SUBJECTS** | | | | | |
| **PC** | **DIN 302** | **Interior Design Project-IV** | | 10 | **10** | **M** |
| **SEC** | **DIN 304** | **Interior Lighting and Services Design** | | 4 | **4** | |
| **SEC** | **DIN 306** | **Working Drawing for Interiors** | | 4 | **4** | **M** |
| **OAE** | **As per the OAE list** | **One OAE (Open Area Elective) from the OAE List as per the decision of APC (Academic Program Committee)** | | 3 | **3** | |
| **SEC** | **DIN 308** | **Field Study *** | | 1 | **1** | |
| | **LECTURE/ THEORY SUBJECTS** | | | | | |
| **PC** | **DIN 310** | **Estimation and Costing** | 2 | | **2** | |
| **AEC** | **DIN 312** | **Design Entrepreneurship** | 2 | | **2** | **M** |
| | | **Total** | **4** | **22** | **26** | |

*** *NUES** *Non University Exam Subject, Comprehensive evaluation by the concerned teacher, out of 100, as per detailed syllabus.*

**#Internship to be done in summer vacations after 6th Semester and Credits to be included in Semester 7.**

***Note: PC**: Program Core, **ES**: Engineering Science, **SEC**: Skill Enhancement Course, **PCE**: Program Core Elective, **OAE**: Open Area Elective, **AEC:** Ability Enhancement Course*

## SEVENTH SEMESTER

| Group | Paper Number | Paper | Lecture (L)/ Tutorial (T) | Studio (S)/ Practical (P) | Credits | Status |
|---|---|---|---|---|---|---|
| | **PRACTICAL/ STUDIO SUBJECTS** | | | | | |
| **PC** | **DIN 401** | **Interior Design Project-V** | | 10 | **10** | **M** |
| **PC** | **DIN 403** | **Interdisciplinary Space Design** | | 6 | **6** | **M** |
| **PC** | **DIN 405** | **Dissertation** | | 6 | **6** | **M** |
| **SEC** | **DIN 407** | **Internship *** | | 2 | **2** | |
| | **LECTURE/ THEORY SUBJECTS** | | | | | |
| **PC** | **DIN 409** | **Site & Project Management** | 2 | | **2** | **M** |
| **PCE** | **As per the PCE list** | **One PCE (Program core Elective) from the PCE List as per the decision of APC (Academic Program Committee)** | 2 | | **2** | |
| | | | | | | |
| | | **Total** | **4** | **24** | **28** | |

** **NUES** Non University Exam Subject, Comprehensive evaluation by the concerned teacher, out of 100, as per detailed syllabus.*

**#Internship to be done in summer vacations after 6th Semester and Credits to be included in Semester 7.**

## Program Core Electives (PCE) List for Semester 7*

| Paper No. | Paper Title | Lecture (L)/Tutorial (T) | Studio (S)/ Practical (P) | Credits | Status |
|---|---|---|---|---|---|
| **DIN 411** | **Branding in Interiors** | 2 | - | 2 | |
| **DIN 413** | **Interior Landscape** | 2 | - | 2 | |
| **DIN 415** | **Interior Renovation & Adaptive Reuse** | 2 | - | 2 | |

*Program Core Electives (PCE) can be augmented as per the industry/academic requirements.

***Note: PC**: Program Core, **ES**: Engineering Science, **SEC**: Skill Enhancement Course, **PCE**: Program Core Elective, **OAE**: Open Area Elective, **AEC:** Ability Enhancement Course*

## EIGHTH SEMESTER

| Group | Paper Number | Paper | Lecture (L)/ Tutorial (T) | Studio (S)/ Practical (P) | Credits | Status |
|---|---|---|---|---|---|---|
| | **PRACTICAL/ STUDIO SUBJECTS** | | | | | |
| **PC** | **DIN 402** | **Design Thesis** | | 20 | **20** | **M** |
| **PC** | **DIN 404** | **Design Degree Show*** | | 4 | **4** | |
| | **LECTURE/ THEORY SUBJECTS** | | | | | |
| **PC** | **DIN 406** | **Professional Practice** | 2 | | **2** | |
| | | **Total** | **2** | **24** | **26** | |

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***Note: PC**: Program Core, **ES**: Engineering Science, **SEC**: Skill Enhancement Course, **PCE**: Program Core Elective, **OAE**: Open Area Elective, **AEC:** Ability Enhancement Course*

**M** Mandatory for award of degree

| Credits in Semester | I | II | III | IV | V | VI | VII | VIII | TOTAL CREDITS |
|---|---|---|---|---|---|---|---|---|---|
| | **26** | **26** | **26** | **26** | **26** | **26** | **28** | **26** | **210** |

**NOTE:**

1. The total number of Credits for the B. Design program =210
2. Student shall be required to appear in examination of all courses. However, to award a student shall be required to earn a minimum of 200 credits including mandatory subjects [M].

**FOR LATERAL ENTRY STUDENTS:**

1. The total number of Credits of the B. Design program =160
2. Each student shall be required to appear for examination in all courses Third Semester onwards. However, to award a student shall be required to earn a minimum of 150 credits including mandatory subjects [M].

## Open Area Elective (OAE) List

| Paper No. | Paper Title | Lecture (L) /Tutorial (T) | Studio (S)/ Practical (P) | Credits | Status |
|---|---|---|---|---|---|
| **DID 308** | **Digital Fabrication** | - | 3 | **3** | |
| **DID 310** | **Light and Fixture Design** | - | 3 | **3** | |
| **DID 312** | **Design of Intelligent Devices** | - | 3 | **3** | |
| **DIN 314** | **Merchandising & Display design** | - | 3 | **3** | |
| **DIN 316** | **Design For Sustainability** | - | 3 | **3** | |
| **DIN 318** | **Furniture Design** | - | 3 | **3** | |
| **DIX 306** | **Creative Coding** | - | 3 | **3** | |
| **DIX 308** | **Visual Communication** | - | 3 | **3** | |
| **DIX 310** | **Environmental Graphic Design** | - | 3 | **3** | |

* Students must opt for an open elective course that has **not** been taken by them previously in their course of study.

**FIRST SEMESTER**

| **Course Code: DIF 101** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Design Studio-I** | 0 | 6 | 6 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | To relate with various elements and principles of design and develop an understanding of design for users. |
| **CO2** | To Interpret the works of renowned designers from varied fields of design and compare various design processes. |
| **CO3** | To build technical design knowledge and to develop basic designing skills using creative thinking processes. |
| **CO4** | To develop design communication through documentation, graphical and verbal presentations. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | 3 |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 1 | 3 | 2 |
| **CO4** | | 1 | 2 | 1 | 3 | | 3 | 2 |

**Course Content**

Unit I
DESIGN & USER
Understanding design and user and various terminologies associated with design. Understanding relation between design and user. Basic Anthropometry, identifying design elements and principles.

Unit II
DESIGN THINKING & DESIGN PROCESS
Explorating various design processes in varied fields of design. Understanding each element of the design process. Learning and developing documentation and basic design interpretation skills.

Unit III
CREATIVE THINKING
Out of the box thinking, idea mapping,storyboarding exercises, Mind mapping, brainstorming, problem solving techniques. Design, Invention, opportunity, problems, improvement, Simple Design exercises. Creative Design process – conceptual design, embodiment design, detail design, Iterations.
Understanding and generating the idea, its expression in different methods using manual, digital media etc., Schematic Design development, Mock up models and visualizations.

Unit IV
DESIGN DEVELOPMENT
Design development (on appropriate scale)- representations of drawings, Expression of the design through 3d Model development on appropriate scale and materials, Design communication & Final portfolio submission (manual or digital output)

**Text Books/ Reference Books:**


1. Neufert, E.(2019). Neufert Architects' Data. (Fifth Edition). Wiley-Blackwell.
2. Chakrabarti, D. (1997). Indian Anthropometric Dimensions for Ergonomic Design practice. National Institute of Design.
3. Lewrick, M. , Link, P. , Leifer, L. (2020). The Design Thinking Toolbox: A Guide to Mastering the Most Popular and Valuable Innovation Methods (Design Thinking Series). Wiley.
4. Stone, T. (2010). Managing the Design Process-Concept Development: An Essential Manual for the Working Designer: 1. Rockport Publishers.
5. Judkins, R. (2015). Art of Creative Thinking. Hachette Book Publishing.

**FIRST SEMESTER**

| **Course Code: DIF 103** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Elements and Principles of Design** | 0 | 6 | 6 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | To relate and compare basic principles of design through elements of design. |
| **CO2** | To understand and skillfully apply design principles effectively in different media. |
| **CO3** | To assess various forms, shapes and spaces and explain the applications of Gestalt's law of visual perception. |
| **CO4** | To create various innovative explorations using the skills and knowledge of design theories. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | 3 |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 1 | 3 | 2 |
| **CO4** | | 1 | 2 | 1 | 3 | | 3 | 2 |

**Course Content**

Unit I
ELEMENTS OF DESIGN
An introduction to various elements: line,color, shape, form, texture and space. Concept of visual language and visual design within the context of flat 2D pictorial space.

Unit II
PRINCIPLES OF DESIGN
Principles of design, Introduction to symmetry, balance, rhythm, repetition, scale/proportion, volume unity and variety within the context of visual scheme and design. Gestalt laws, composition, and figure and ground relationships.

Unit III
SHAPE-FORM EXPLORATIONS
Abstraction, Expression and Meaning in Form –To appreciate and articulate the language of form, to sensitize students towards manipulation of forms in 2D and 3D also Form integration and transition.

Unit IV
NEGATIVE-POSITIVE SPACE
Introduction to the concept of negative space. Balancing of positive and negative spaces. Use of symmetry, generation of patterns, and textures using simple elements.

**Text Books/ Reference Books:**


1. Structure and Form in Design: Critical Ideas for Creative Practice, Hann, M., 2013, A&C Black
2. Design Syntactics: A functional approach to visual product form Theory, Models, and Methods, Warell, A., 2001, Chalmers University of Technology
3. Principles of Form & Design, Wucius Wong, 1993, Wiley Publication
4. Creativity and art: three roads to surprise, Boden, M. A., 2012, OUP Oxford
5. Elements of Design and the Structure of Visual Relationships, H.G. Greet and R. R. Kostellow, 2002, Architectural Press, NY

## FIRST SEMESTER

| **Course Code: DIF 105** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Representation Techniques & Design Fundamentals** | 0 | 4 | 4 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | To recall fundamental techniques of concept sketches, design development sketches, |
| **CO2** | To understand & develop the appropriate skills for visualization and representation. |
| **CO3** | To interpret and understand the fundamentals involved in 2-dimensional design- its elements, features and principles. |
| **CO4** | To create compelling and detailed line drawings of real or imaginary objects. To effectively explain an idea through visual language. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | 3 |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 1 | 3 | 2 |
| **CO4** | | 1 | 2 | 1 | 3 | | 3 | 2 |

**Course Content**

Unit I
LINES & COLOUR
Introduction to pencil exercises. grades and points of pencils, lines and tone, Rapid sketching, representing concepts - sketching for ideation; lines; geometric shapes; introduction to colour and texture.Color wheel, color combinations, and its dimensions: hue, value, and chroma. Depth and dimension, detail & texture, sunlight & shadow. Introduction – fundamentals of drawing and its practice, introduction to drawing equipment, familiarization, use and handling of various media, drawing techniques. Grid based drawing, analytical representation; Inside and outdoor sketching.

Unit II
LIGHT & SHADOW
Rendering and Sciography, Studies in light and shadow of 3-dimensional form representations; pencil rendering, Representing reality Mimetic Imagery and Abstraction; Representing Memory and Imagination; Object representation;; Figure drawing gestures and movements

Unit III
DESIGN ELEMENTS IN NATURE
Expressions and explorations using Points, Lines, Planes and Volumes Its relation in context to nature and environment Representing Nature and life

Unit IV
VISUAL PRINCIPLES OF DESIGN
Study and understanding of Frame of Reference or Point of Views Principles of colour theory and explorations. Understanding of the visual relationships – balance, proportion, order, symmetry, rhythm, etc. Study of visual principles of composition: grids, layouts, asymmetry, balance and asymmetry.

**Text Books/ Reference Books:**

1. Interaction of Color, 2013, Authors Josef Albers and Nicholas Fox Weber, Yale University Press.
2. The Art of Drawing, Madison Books, Willy Pogany, 1996, Madison Books
3. Techniques for watercolor, pen and ink, pastel and coloured markers, R. Kasprin, Design Media, 1999, John Wiley & Sons

4. Elements of Design, Gail Greet Hannah, 2002, Princeton Architectural Press.
5. Color Theory: An essential guide to color-from basic principles to practical applications (Artists library) Paperback-2013 by Patti Mollica (Author).

**FIRST SEMESTER**

| **Course Code: DIF 107** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Computer Graphics-I** | 0 | 3 | 3 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | To define the computer aided design. To demonstrate experimentation with drawing, digital rendering and presentation techniques. |
| **CO2** | To build practical skills in the computer software for design presentations. |
| **CO3** | To inspect knowledge and understanding of digital rendering skills and its relevance in Design. |
| **CO4** | To assess functional and aesthetic requirements of design and the skills of application of those in digital graphics. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | | | | 3 | | 2 | 3 |
| **CO2** | | | 3 | | 3 | | 2 | 3 |
| **CO3** | 1 | 2 | 1 | | 3 | | 2 | 3 |
| **CO4** | 2 | 2 | | 2 | 3 | 2 | 2 | 3 |

**Course Content**

Unit I
2D COMPUTER AIDED DESIGN
Introduction to Computer Aided Designing (Essentiality of CAD), User Interface Understanding Coordinate System, Drafting Basic Shape with Dimension, Unit System, layers, Drawing creating drawings.

Unit II
3D COMPUTER AIDED DESIGN
Plotting, Hatching & Applying Various Patterns, Customizing Different Dimension Styles, Layout Slide Show, Managing Project File, File Import Export. Basic 3D Extrusions.

Unit III
INTRODUCTION TO IMAGE EDITING SOFTWARE
Introduction to Interface and various functions of tools and techniques, Introduction to tools selection & color models, Creating shapes & patterns and various visual effects, Transforming & retouching, Filters and their specific effects, Working with type, Saving a file

Unit IV
CREATION OF GRAPHIC IMAGES
Developing of Layers, Working with different layers to obtain desirable graphic effects, Introduction to CMYK, Colour & tonal adjustment, Creation of graphics for visual design

**Text Books/ Reference Books:**


1. Openshaw, S., & Turton, I. (2005). High Performance Computing and the Art of Parallel Programming. Routledge.
2. K Lalit Narayan, K Mallikarjuna Rao, & M MM Sarcar. (2008). Computer aided design and manufacturing. Prentice-Hall Of India.
3. Snider, L. (2014). Photoshop CC. Sebastopol, Ca ; O'reilly Media
4. Faulkner, A., Conrad Chavez, C. (2018). Adobe Photoshop CC Classroom in a Book. Pearson Education.
5. Akenine-Mo¨ller, T., Haines, E. , Hoffman, N., Pesce, A., Iwanicki, M., Hillaire, S. (2018). Real-Time Rendering (Fourth Edition). A K Peters/CRC Press.

## FIRST SEMESTER

| **Course Code: DIF 109** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Geometrical Construction** | 0 | 3 | 3 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | To comprehend the drafting tools to produce qualitative work. |
| **CO2** | To formulate and make use of observation-based knowledge and methods to implement scale, dimension, composition in manual drafting. |
| **CO3** | To identify different processes and terminologies in 2d and 3d graphical representations. |
| **CO4** | To assess and explain learnings of visualization of solids to surface developments and vice versa. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | 1 | 2 | 1 | 1 | | 1 | 2 | 2 |
| **CO2** | 1 | 2 | | 2 | 1 | 2 | 2 | 3 |
| **CO3** | 2 | 2 | | 3 | 2 | 2 | 3 | 3 |
| **CO4** | 1 | 2 | | 3 | 3 | 3 | 3 | 3 |

**Course Content**

Unit I
DRAWING FUNDAMENTALS
Lettering and Dimensioning, Elements of dimensioning - systems of dimensioning, scale.

Unit II
ORTHOGRAPHIC PROJECTIONS
Principles and projection methods of orthographic projection, Development of surfaces, Sections.

Unit III
AXONOMETRIC & ISOMETRIC PROJECTION
Development of surfaces for various regular solids. Isometric Projection and Axonometric Projection
Isometric Projection: Isometric scales, Isometric projections of simple and combination of solids

Unit IV
PERSPECTIVE
Perspective Projection: Perspective views 1 point, 2 point– Plane figures and simple solids and combination of solids

**Text Books/ Reference Books:**


1. Ching, F. D. (n.d.). Architectural Graphics Ed. 6. John Wiley & Sons.
2. Bhatt, N.D. and Panchal, V.M. (1996). Engineering Drawing – Plane and Solid Geometry. Charotar Publishing House.
3. Dhawan, RK. (2019). A Textbook Of Engineering Drawing (Lpspe). S Chand Publishing.
4. McGraw-Hill, G. (2003). Basic Technical Drawing. McGraw-Hill Inc.,US.
5. Gill, P.S. (2013). Engineering Drawing. S.K. Kataria & Sons.

**FIRST SEMESTER**

| **Course Code: DIF 111** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Communication Skills** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The Student will be able to relate and understand the basic concepts of communication. |
| **CO2** | The Student will be able to demonstrate non verbal and verbal communications in real life situations. |
| **CO3** | The Student will be able to apply writing and documenting information skills in relevant formats. |
| **CO4** | The Student will be able to apply speaking skills and learn profusely about Professional, Social and cultural etiquettes along with teamwork. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | | | 1 | | | | 2 | 1 |
| **CO2** | | | 1 | | | | 2 | 1 |
| **CO3** | | | 1 | | | | 2 | 1 |
| **CO4** | | | 1 | | | | 2 | 1 |

**Course Content**

Unit I
SENTENCE STRUCTURE & VOCABULARY
Parts of speech, writing well formed sentences, Subject - verb agreement, Punctuation/ Spellings, common errors.

Unit III
VERBAL & NON VERBAL COMMUNICATION
Process of communication , communication as a process, formal & informal communication, intercultural communication, barriers to effective communication and remedies, characteristics of effective communication. Concept and elements of non-verbal communications.

Unit III
WRITING SKILLS
Letter, email writing, Technical Documents, Types, structure, Significant features of Resume Writing & Report Writing, Project/ Research Proposal Writing.

Unit IV
FORMAL COMMUNICATION & PRESENTATION ETIQUETTES
Speaking Skills, Self introduction and branding, Holding a conversation, Professional Skills, body language and formal/ professional presentation etiquettes. Presentation skills, interview skills, group discussions, electric and social media communication.

**Text Books/ Reference Books:**


1. High English Grammar and Composition by Wren, P.C. & Martin H., S.Chand & Company Ltd, New Delhi.
2. Technical Communication: Principles & Practice by Meenakshi Raman, New Delhi: Oxford University Press
3. Be Grammar Ready: The Ultimate Guide to English Grammar by John Eastwood, New Delhi, Oxford University Press, 2020.
4. Communication Skills: A Workbook by Sanjay Kumar & Pushp Lata, New Delhi , Oxford University Press 2018.
5. Advanced Technical Communication by Kavita Tyagi & Padma Mishra, New Delhi, PHI Learzipe, 2011.

**FIRST SEMESTER**

| **Course Code: DIF 113** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Environmental Studies** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | To recall the elements of the ecosystem and the environment and its challenges. |
| **CO2** | To understand our natural resources, ecosystem and the biodiversity of the planet, obtain basic knowledge on environment pollution, its types and pollutants. |
| **CO3** | To identify the Social Issues and the impact of Population on the Environment. |
| **CO4** | To analyze the role of a designer in maintaining a clean environment and useful environment for the future generations and in maintaining ecological balance and preserving bio- diversity. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | | 2 | 1 | | | 2 | 2 | 1 |
| **CO2** | | 2 | 1 | | | 2 | 2 | 1 |
| **CO3** | | 2 | 1 | | | 2 | 2 | 1 |
| **CO4** | | 3 | 1 | | | 2 | 2 | 1 |

**Course Content**

Unit I
ENVIRONMENT
Description of concept of environment and ecology-need for public awareness Interaction among ecological factors as related to water, land, air light and temperature.
Factors Responsible for Change-Global Warming and climate change-loss of biodiversity,deforestation and desertification

Unit II
ECOSYSTEM
Structure, Function and energy cycles in the ecosystem. Ecological succession, Ecosystem development, Climax concept Interrelation between natural and built environment in urban and rural settlements Forest resources: Use and over-exploitation, deforestation, case studies- timber extraction, mining, dams and their effects on forests and tribal people. Land and soils: formation of soils, its types, basic features and properties as related to the built environment. Water and precipitation, water cycle, Prevention and control of water pollution.Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems Conservation & management, impact of manmade environment on water.

Unit III
ENVIRONMENTAL CHALLENGES
Air and air pollution: its causes and impact on human settlements.
Control measures of: (a) Air pollution (b) Water pollution (c) Soil pollution (d) Marine pollution (e) Noise pollution (f) Thermal pollution (g) Nuclear hazards – soil waste management: disaster management: floods, earthquake, cyclone and landslides. Environment protection act – Air (Prevention and Control of Pollution)act – Water (Prevention and control of Pollution) act – Wildlife protection act – Forest conservation act.

Unit IV
SUSTAINABLE DEVELOPMENT
From unsustainable to sustainable development – urban problems related to energy. Water conservation,

| |
|---|
| rainwater harvesting, and watershed management. Resettlement and Rehabilitation of people; its problems and concerns |
| **Text Books/ Reference Books:**<br>1. Textbook of environments courses of UG, courses, Baructa E, 2004, UGC University Press, Joseph, Benny, 2005, Env.Studies Tata Mac grawhill.<br>2. "Ecology and Environment", Sharma P.D., 2018, Rastogi Publications, Meerut, India.<br>3. "Practical Ecology for PlannersDevelopers and Citizens", Perlman, D. andMiclder, J., 2004, Island Press.<br>4. "The Ecological City: Preserving andRestoring Urban Biodiversity", Platt, R.H., 1994, N.Y. Academy of Sciences.<br>5. "Perspectives in Environmental Studies", Aruba Kashia andKashia C.P., 2005, New age International(P) Ltd., New Delhi. |

## SECOND SEMESTER

| **Course Code: DIF 102** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Design Studio-II** | 0 | 6 | 6 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | To Demonstrate and Illustrate research-based knowledge and methods and the synthesis of information to provide context specific solutions. |
| **CO2** | To develop and assess design briefs and select a design process for reaching a design solution. |
| **CO3** | To demonstrate basic designing skills and knowledge using creative thinking processes and create design solutions. |
| **CO4** | To demonstrate and assess creative skills of documentation, graphical, fabrication & model making and verbal presentations. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | 3 |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 1 | 3 | 2 |
| **CO4** | | 1 | 2 | 1 | 3 | | 3 | 2 |

**Course Content**

Unit I
RESEARCH AND DOCUMENTATION
Various types of research and data collection. Understanding and selecting a user group based on ethnography, cultural or other parameters. observation and field research. Documentation and analysis of research.

Unit II
CREATING BRIEF
Creating the design brief based on research. Selecting design process, ideating and brainstorming design solutions and interventions.

Unit III
CONCEPT DEVELOPMENT
Understanding and generating the idea, its expression in different methods using manual, digital media etc., Schematic Design development with spatial planning, Mock up models and visualizations with materials.

Unit IV
DESIGN DEVELOPMENT
Design development (on appropriate scale)- detailed drawings, Expression of the design through 3d Model development on appropriate scale and materials, Design communication & Final portfolio submission (manual or digital output)

**Text Books/ Reference Books:**


1. Neufert, E.(2019). Neufert Architects' Data. (Fifth Edition). Wiley-Blackwell.
2. Dechiara, J, Julius Panero, J., Zelnik, M. (2019). Time-Saver Standards for Interior Design. McGraw-Hill Inc., US.
3. Laurel, Brenda. Design research: Methods and perspectives. MIT press, 2003.
4. Kothari, C. R. Research methodology: Methods and techniques. New Age International, 2004.
5. Sanoff, Henry. Visual research methods in design. John Wiley & Sons Incorporated, 1991.

## SECOND SEMESTER

| **Course Code: DIF 104** | L/T | S/P | C |
|---|---|---|---|
| **Subject: 3D Visualization and Illustration** | 0 | 4 | 4 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | To Understand the representation principles and apply them to various projects. |
| **CO2** | To be able to make imagery through memory and imagination, image manipulation and form high quality renderings. |
| **CO3** | To be able to visualize ideas; do visual design explorations. |
| **CO4** | To be able to project ideas in a compelling manner from imagination to media. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | 3 |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 1 | 3 | 2 |
| **CO4** | | 1 | 2 | 1 | 3 | | 3 | 2 |

**Course Content**

Unit I
INTRODUCTION TO FORM EXPLORATIONS
This includes Free hand rapid sketching, doodling and rendering techniques. Students will explore both 2D and 3D format going beyond the actual dimensions of the perceived form.

Unit II
VISUAL IDEA GENERATION
Deriving new ideas from shapes and patterns. This includes use of both manual and digital tools for idea generation through illustration techniques and methods. An abstract to a representational outcome and vice versa.

Unit III
TECHNIQUES AND METHODS OF IMAGE MANIPULATION
Derivation of new ideas and visual meanings by juxtaposition, manipulation and alteration of existing visual schemes for idea generation. The theme could be anything ranging from abstract forms or ideas to representational motifs.

Unit IV
VISUAL REPRESENTATIONS
Introduction to Importance of text and words in illustrations. Storytelling through illustrated drawings and representation of concepts in the form of word illustrations.

**Text Books/ Reference Books:**


1. Experiences in Visual Thinking, Rober McKim, 2018, Brooks/Cole Publishing Company
2. Exploring Drawing for Animation (Design Exploration Series), Stephen Missal, 2003, Thomson Delmar Learning
3. Design Drawing, D. K. Francis Ching, 2018, John Wiley & Sons
4. Design Drawing techniques for architects, graphic designers and artists, Tom Porter,2019, Oxford Architectural Press
5. The complete guide to illustration & design, Terence ed. Dalley, 1980, Phaidon, Oxford

## SECOND SEMESTER

| **Course Code: DIF 106** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Computer Graphics-II** | 0 | 3 | 3 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | To understand Vector Graphics and Raster Graphics |
| **CO2** | To learn and understand Layouts |
| **CO3** | To develop an understanding of projects and documents using Vector and Raster Graphics. |
| **CO4** | The students will be able to prepare Layout Designs, Brochure and Print related designs, Digital Designs. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | | | | 3 | | 2 | 3 |
| **CO2** | | | 3 | | 3 | | 2 | 3 |
| **CO3** | 1 | 2 | 1 | | 3 | | 2 | 3 |
| **CO4** | 2 | 2 | | 2 | 3 | 2 | 2 | 3 |

**Course Content**

Unit I
INTRODUCTION TO VECTOR BASED SOFTWARE
Artboards, Vector basics / Selection & Direct selection tool, page Fill & Stroke effects, Color / Swatches / Pantone's / Gradients& more. Creating shape vectors, grouped vectors & Compounding vector shapes, Drawing with the Pen tool / Brush tool / Pencil tool. The Blob brush tool & Eraser tool, setting up a document / Placing in a drawing / Sketch Image trace tool for sketches Drawing

Unit II
INTRODUCTION TO INTERFACE
Tracing a hand drawn sketch & converting to vector graphics, Compounding vector shapes & strokes / Pathfinder Tool, Coloring & Text, Coloring a vector drawing, Adding type to a poster, Finishing & Exporting, Exporting ready for print.

Unit III
INTRODUCTION TO WORKSPACE
Application Bar, Control Bar, Toolbar, Floating Panels, Guides/Rulers, Columns/Margins, Using The Zoom Tool, Customizing Workspace

Unit IV
VECTOR BASED PROJECTS
Developing of graphic based projects (print based/tangible outcomes), Introduction to Printing Techniques and related outcomes

**Text Books/ Reference Books:**

1. Karlins, D. (2020). Adobe Illustrator CC. John Wiley & Sons, Inc..
2. CPA John Kimani, & Dr. James Scott. (2023). Adobe Illustrator Professional Level. FinstockEvarsity Publishers...
3. DeJarld, T., & Kelly Kordes Anton. (2019). Adobe InDesign Classroom in a Book (2020 release). Adobe Press..
4. Shufflebotham, R. (2021). InDesign in easy steps, 3rd edition. In Easy Steps.

## SECOND SEMESTER

| **Course Code: DIF 108** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Typography Fundamentals** | 0 | 3 | 3 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | To recall and illustrate the use of type, type--‑families and their variations. |
| **CO2** | To develop an understanding of calligraphy, Compositions with type, Expressive typography, 3- dimensional typography |
| **CO3** | To develop an understanding of Explorative printing on different surfaces. |
| **CO4** | To apply and analyze attained skills in creating Infographics by using different typefaces and tools. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | | | | 3 | | 2 | 3 |
| **CO2** | | | 3 | | 3 | | 2 | 3 |
| **CO3** | 1 | 2 | 1 | | 3 | 2 | 2 | 3 |
| **CO4** | 2 | 2 | | 2 | 3 | 3 | 2 | 3 |

**Course Content**

Unit I
TYPE
Introduction to type and its history. Type as a form and means of communication. Type in our environment.

Unit II
TYPEFACES
Introduction to Indian Type, Learning to see and recognize typefaces, type families and know about type designers. Construction of type with hand.

Unit III
STRUCTURE OF TYPE
Structure and anatomy of the type; x--‑height, ascenders, descenders, counter, cap--‑ height, baseline. Typographic variables: kerning, tracking, leading, Spacing, Classification of type.

Unit IV
TRADITIONAL PRINTING
Semantics of type Legibility and readability issues in type. Vernacular letter--‑forms. Introduction to traditional printing techniques like Block printing, Screen printing, Hot stamping

**Text Books/ Reference Books:**


1. Carter, R., Maxa, S., Sanders, M., Meggs, P. B., & Day, B. (2018). Typographic design : form and communication. John Wiley & Sons, Inc. https://www.wiley.com/en-us/Typographic+Design%3A+Form+and+Communication%2C+7th+Edition-p-9781119312567.
2. Hurlburt, A. (1999). The grid : a modular system for the design and production of newspapers, magazines, and books. Wiley..
3. Cullen, K. (2005). Layout workbook : a real-world guide to building pages in graphic design. Rockport Publishers.
4. Puhalla, D., & Cullen, K. (2018). Layout Workbook: Revised and Updated. Rockport Publishers.

## SECOND SEMESTER

| **Course Code: DIF 110** | | | | | | | L/T | S/P | C |
|---|---|---|---|---|---|---|---|---|---|
| **Subject: Makers Lab*** | | | | | | | 0 | 4 | 4 |
| **Marking Scheme (NUES):**<br>Teachers Continuous Evaluation: 100 Marks | | | | | | | | | |
| **Course Outcomes :** | | | | | | | | | |
| **CO1** | To define and choose the soft materials for Model-Making And Material Exploration on the bases of its properties | | | | | | | | |
| **CO2** | To experiment with soft and pliable material to create new forms. | | | | | | | | |
| **CO3** | To develop and compare skills and techniques to make simple form models. | | | | | | | | |
| **CO4** | To select and adapt hands on skills and techniques to make models on variable materials using skillful joinery techniques. | | | | | | | | |
| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | |
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | 3 | |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 1 | 3 | 2 | |
| **CO4** | | 1 | 2 | 1 | 3 | | 3 | 2 | |
| **Course Content** | | | | | | | | | |
| Unit I<br>MODEL MAKING & TOOLS<br>Need; role of scale models in design: general practices: Essentials of model making: understanding of various tools and machines employed, best practices involved in operating the tools and the techniques. Introduction to the Mount Board/Paper/Boards for model making – types, properties etc. Hand building techniques on different planes - making rigid forms like, cubic, spherical, pyramidal shaped forms, depiction of steps, free forms, sculptures, etc. | | | | | | | | | |
| Unit II<br>MATERIALS AND TECHNIQUES (CLAY/ PLASTER OF PARIS)<br>Introduction to the clay/ Plaster of Paris for model making, types and mixtures, properties etc. Hand building techniques- coiling, hand building with clay strips- making a small sculpture in Relief work – addition - making a mural, scooping – tile work. | | | | | | | | | |
| Unit III<br>MATERIALS AND TECHNIQUES (WOOD/ CANE/ BAMBOO)<br>Understanding the material and tools by making objects which allow students to explore the forms, surfaces, textures and patterns. Explore different joinery, support conditions, and woven surfaces. | | | | | | | | | |
| Unit IV<br>MATERIALS AND TECHNIQUES (METAL)<br>Metals in built form activity – horizontal, vertical and inclined surfaces – in interior environment elements- products and furniture forms - doors, windows, grilles, railing, stair etc. Metals and other materials – form and joinery. | | | | | | | | | |
| **Text Books/ Reference Books:**<br>1. The crafts and art of Bamboo, Rev. updated edition, Carol Stangler, 2009, Lark books<br>2. Sand Casting by K. G Subhramaniam<br>3. Clay modelling for beginners by Jeanie Hirsch 2015<br>4. Taunton's Complete Illustrated Guide to Woodworking, Lonnie Bird, Jeff Jewitt Thomas lie-Nielsen, 2005, Taunton<br>5. Wood working Basics : Mastering the essentials of craftsmanship, Peter Korn, 2003, Taunton. | | | | | | | | | |

**SECOND SEMESTER**

| **Course Code: DIF 112** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Universal Design** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | To Define the origin and principles of Universal Design and it's application. |
| **CO2** | To classify and illustrate a user group. |
| **CO3** | To develop an understanding of inclusive and accessible design and classify various design guidelines for inclusivity. |
| **CO4** | To assess adaptation of SDG in developing design solutions |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | | 2 | | | | 1 | | 1 |
| **CO2** | | 2 | | 1 | | 1 | | 1 |
| **CO3** | | 2 | 2 | 3 | | 3 | | 2 |
| **CO4** | 2 | 2 | 3 | 3 | 2 | 3 | 1 | 2 |

**Course Content**

Unit I
UNIVERSAL DESIGN
Introduction to universal design - Its Origin and emergence, Need and its relevance today, Examples of UD. Principles of Universal Design, Goals of Universal Design, Understanding above from various design spectrums. Application of universal design.

Unit II
USER GROUP
Definition of user, user group, characterization of user group on the bases of gender, age, geography, economics, abilities etc and challenges associated with it. Case studies

Unit III
DESIGN FOR INCLUSIVITY
Inclusive design, accessible design, Research and design guidelines for studying and designing for inclusivity. Accessibility Standards and Guidelines Physical accessibility standards for Barrier free environment.

Unit IV
SUSTAINABLE DEVELOPMENT GOALS
introduction to sustainable development goals, Its Origin and emergence, Need and its relevance today, Examples and goals of SDG, Understanding above from various design spectrums. Adaptation of sustainable development goals -Understanding above from various design spectrums, Government Initiatives & policies, Understanding Context, Visual Mapping & Resource Mapping

**Text Books/ Reference Books:**


1. Inclusive Design : Designing And Developing Accessible Environments by Rob Imrie Peter Hall, T&F India
2. Universal Design: Principles and Models by Roberta Null (Editor)
3. Chakrabarti, D. (1997). Indian Anthropometric Dimensions for Ergonomic Design practice.National Institute of Design.
4. Universal Design for Learning: Theory and Practice Paperback – by David Gordon (Author), Anne Meyer (Author), David H. Rose (Author)
5. Universal Design for learning- in the classroom Tracey E.Hall, Anne Meyer, David H.Rose

## SECOND SEMESTER

| **Course Code: DIF 114** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Communication Studies and Semiotics** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The Student will be able to understand the science of signs: Semiotics and the related Communication theories that regulate Signs, systems and their meanings |
| **CO2** | To identify the foundational documents of the French, American, and Russian semiotic schools, Semiotics Theory and deconstructing Structure of communication through semiotics |
| **CO3** | To explain about the key theories, concept and analytical methods of applying main communication theories of Structural Semiotics, Social Semiotics and Cognitive Semiotics. |
| **CO4** | To apply and analyze the semiotic analysis on selective specific material: Cultural artifacts, social phenomena, etc. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | | | | 3 | | 2 | 3 |
| **CO2** | | | 3 | | 3 | | 2 | 3 |
| **CO3** | 1 | 2 | 1 | | 3 | 2 | 2 | 3 |
| **CO4** | 2 | 2 | | 2 | 3 | 3 | 2 | 3 |

**Course Content**

Unit I
SEMIOTICS & COMMUNICATION
Introduction to semiotics & communication theory, Foundations that include the semiotics stemming from F. de Saussure's linguistics - structural semiotics - and then, with the pragmatic current, focuses on the specific contexts of interaction, leading finally

Unit II
THEORY OF C.S. PEIRCE
Theory of C.S. Peirce's semiotics, which places interpretation at the center of the functioning of the different types of signs and opens the way today to cognitive semiotics.

Unit III
SEMIOTICS THEORY
The Units and their meaning, Working of all 3 Basic Units: Semantics, Syntactic and Pragmatics to decode meaning of signs, values associated with a sign and the interaction of receivers with a sign for meaning- making

Unit IV
APPLICATIONS OF SEMIOTIC MODEL
A semiotic analysis of a certain phenomenon and presents it in a written and oral form (presentation mode) along with print documentation.

**Text Books/ Reference Books:**


1. Kress Gunther, 2010, London, Routeledge Multimodality: A Social Semiotic Approach to Contemporary Communication,
2. Chandler David, 2007, London, Routeledge Semiotics: The Basics (Second Edition),
3. Barthes Roland,1967, Hill and wang , Elements of semiology
4. Carolyn Handa, 2004, Boston:Bedford/St.Martins, 2004.Visual Rhetoric in a Digital World: A Critical Sourcebook

## SECOND SEMESTER

| **Course Code: DIF 116** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Constitution of India** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | To define the nation's constitution as well as their basic rights. The develop an understanding of their own country's constitution and understanding their own human rights. |
| **CO2** | To understand the relationship between individuals and groups, the society and people. |
| **CO3** | To build human values as well as intellectual and analytical skill with the students. |
| **CO4** | To build an understanding of respecting the rights of other people in their maturity. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | | 2 | 1 | | | 2 | 2 | 1 |
| **CO2** | | 2 | 1 | | | 2 | 2 | 1 |
| **CO3** | | 2 | 1 | | | 2 | 2 | 1 |
| **CO4** | | 3 | 1 | | | 2 | 2 | 1 |

**Course Content**

Unit I
CONSTITUTION
Meaning of the constitution law and constitutionalism Historical perspective of the Constitution of India; Salient features and characteristics of the Constitution of India, Scheme of the fundamental rights

Unit II
FUNDAMENTAL DUTIES & FEDERAL STRUCTURE
The scheme of the Fundamental Duties and its legal status; The Directive Principles of State Policy – Its importance and implementation; Federal structure and distribution of legislative and financial powers between the Union and the States.

Unit III
GOVERNMENT
Parliamentary Form of Government in India – The constitution powers and status of the President of India Amendment of the Constitutional Powers and Procedure; The historical perspectives of the constitutional amendments in India; Emergency Provisions : National Emergency, President Rule, Financial Emergency.

Unit IV
LOCAL SELF GOVERNMENT
Local Self Government – Constitutional Scheme in India; Scheme of the Fundamental Right to Equality; Scheme of the Fundamental Right to certain Freedom under Article 19, Scope of the Right to Life and Personal Liberty under Article 21.

**Text Books/ Reference Books:**


1. Constitution of India, Shukla V. N., 2001, Eastern Book Company Publishers, Lucknow, 10th EDT, pg no 19-304
2. Indian Constitutional Law, Jain M.P., 2008, Wadhwa Publication, 5th EDT, pg no 827-1362
3. Environmental law and policy in India, Divan Shyam and Armin Rosencranz, 2002, Oxford University Press Publisher, New Delhi, 2nd EDT, pg no 579-601
4. The Constitutional Law of India, DR. Joshi. K.C., 2013, Central Law Publishers, 2nd Edt.

## THIRD SEMESTER

| **Course Code: DIN 201** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Interior Design Project-I** | 0 | 6 | 6 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The Student will be able to Demonstrate and Illustrate research-based knowledge and methods including context analysis, case studies of sustainable designs, project requirements and synthesis of information to provide context specific solutions. |
| **CO2** | The Student will be able to interpret how design can impact, interact with, and improve environments while developing an understanding of space to human relation in context to personal spaces. |
| **CO3** | The Student will be able to formally apply methods of spatial planning & design, functionality and aesthetics to a small-scale project with constraints of site and context, applying the knowledge of selected theme, local materials & sustainability. |
| **CO4** | The Student will be able to Assimilate and Apply learning of the interior design process. To demonstrate basic skills of drawings and representation for developing illustrative interior design portfolio. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | 3 | | | 2 | 1 | 2 | | |
| **CO2** | 3 | 3 | 3 | 2 | | 3 | 2 | | 3 |
| **CO3** | 2 | 2 | 3 | 2 | | 2 | 3 | | 3 |
| **CO4** | 2 | 1 | 2 | 2 | 3 | 1 | 2 | 3 | |

**Course Content**

Unit I
RESEARCH AND DOCUMENTATION
Understanding/Insight/Perception – Generating the insight for Context, Sustainability, Purpose, Motivation, End User etc. Action Research -Literature Study, Site Analysis, climatic setting, Case Study, site visit.

Unit II
CREATING BRIEF FOR MINOR & MAJOR PROJECTS
Preparation of design requirements, area requirements based on standards and their interrelation and circulation patterns.

Unit III
CONCEPT DEVELOPMENT
Understanding and generating the idea, its expression in different methods using manual, digital media etc., Schematic Design development with spatial planning, Mock up models and visualizations with materials.

Unit IV
DESIGN DEVELOPMENT & PORTFOLIO DESIGN
Design development (on appropriate scale)- double line representations of drawings, Expression of the design through 3d Model development on appropriate scale and materials, Design communication & Final portfolio submission (manual or digital output)

**Text Books/ Reference Books:**


1. Neufert, E.(2019). Neufert Architects' Data. (Fifth Edition). Wiley-Blackwell.
2. Dechiara, J, Julius Panero, J., Zelnik, M. (2019). Time-Saver Standards for Interior Design. McGraw-Hill Inc., US.
3. Ramstedt, F. (2020). The Interior Design Handbook: Furnish, Decorate, and Style Your Space. Clarkson Potter.
4. Tillotsum, G.H.R. (2021). The tradition of Indian Architecture Continuity, Controversy – Change since 1850. Yale University Press.
5. Rangwala, S.C. (2022). Building Construction. Charotar Pub. House.

## THIRD SEMESTER

| **Course Code: DIN 203** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Interior Material –I** | 2 | 4 | 6 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes:**

| | |
|---|---|
| **CO1** | The Student will be able to define and classify various building elements. |
| **CO2** | The Student will be able to explain the functions and characteristics of common building systems and assemblies in interiors. |
| **CO3** | The Student will be able to make use of the standard nomenclature and categorize various types of bricks, brick masonry bonds & inspect the application of the same. |
| **CO4** | The Student will be able to interpret an understanding of different types of bricks ; stone masonries, bamboo and their application. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | 2 | 3 | | 2 | 1 | 3 | 2 | |
| **CO2** | | 2 | 2 | | 2 | 3 | 2 | 2 | |
| **CO3** | | 2 | 1 | 2 | 2 | | 3 | 2 | |
| **CO4** | 3 | | 1 | 3 | 2 | 1 | 3 | 2 | |

**Course Content**

Unit I
INTRODUCTION TO BASIC BUILDING MATERIALS
Clay and Clay products: mud blocks, Earth stabilized blocks, Burnt Bricks, terracotta tiles, brick ballast and surkhi, fly ash blocks, concrete blocks. Site visits.

Unit II
BRICK, CEMENT AND BRICK MASONRY
Brick terminology & its manufacturing process. Types of Bricks: e.g. Bull Nose, Queen Closer, different kinds of bats etc. Brick bonds- English bond and Flemish (single and double) bond in brick for up to two brick thick wall. cement manufacturing and grades. Mortar proportions and joints.

Unit III
STONE MASONRY
Dressing, laying in Stone Masonry- Tools used, Surface finishes, principles of stone masonry, Classification of Stone Masonry- Random Rubble, Coursed Rubble, Ashlar, Composite Stones. Joints of stone masonry

Unit IV
BAMBOO
Bamboo and other natural materials: Bamboo as plant classification, Properties, strength, processing, harvesting, working of Bamboo tools – Treatment and preservation of Bamboo and uses of Bamboo, bamboo joints.

**Text Books/ Reference Books:**

1. McKay (2013). Building Construction: Metric Volume 1, 2, 3, 4 (4th Edition). Pearson Education India.
2. Ching, F.D.K. (2020). Building Construction Illustrated (6th Edition). Wiley
3. Barry, R. (1999). The Construction Of Buildings Vol 1, 2, 3, 4. Wiley–Blackwell
4. Rangwala, S.C. (2022). Building Construction. Charotar Pub. House.
5. Kingsley, D.B. (2020). Hand drafting for interior design. New York: Fairchild books.

## THIRD SEMESTER

| **Course Code: DIN 205** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Digital Modelling in Interiors-I** | 0 | 4 | 4 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes:**

| | |
|---|---|
| **CO1** | The Student will be able to define the concepts of 3D modeling. To demonstrate experimentation with forms, mapping, rendering and presentation techniques. |
| **CO2** | The Student will be able to build practical skills in the computer software for interior design presentations. |
| **CO3** | The Student will be able to inspect knowledge and understanding of digital rendering skills and its relevance in Interior Design. |
| **CO4** | The Student will be able to assess functional and aesthetic requirements of interior design and the skills of application of those in virtual environments. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | | | | 3 | | 2 | 3 | |
| **CO2** | | | 3 | | 3 | | 2 | 3 | |
| **CO3** | 1 | 2 | 1 | | 3 | | 2 | 3 | |
| **CO4** | 2 | 2 | | 2 | 3 | 2 | 2 | 3 | |

**Course Content**

Unit I
ADVANCED IMAGE EDITING
Rendering on 2D 3D projects with advanced photoshop tool.

Unit II
SOLID MODELING
Orientation towards 3D: 2D to 3D conversion, perspective view

Unit III
INTRODUCTION TO DIGITAL 3D TOOLS
Basic Interface and functions. 3D Modeling tools and techniques, apply more complex tools and methods for 3D renders, Material, Texture in 3D Model, Demonstrate presentation in 3D render

Unit IV
FINAL RENDER OUTPUT
Final Project output in various Image formats
Final Project output in Walkthrough/Animation/Video format

**Text Books/ Reference Books:**


1. Cardoso, J. (2016). 3D Photorealistic Rendering: Interiors & Exteriors. A K Peters/CRC Press.
2. Akenine-Mo¨ller, T., Haines, E. , Hoffman, N., Pesce, A., Iwanicki, M., Hillaire, S. (2018). Real-Time Rendering (Fourth Edition). A K Peters/CRC Press.
3. Faulkner, A., Conrad Chavez, C. (2018). Adobe Photoshop CC Classroom in a Book. Pearson Education.
4. The SketchUp Workflow for Architecture: Modeling Buildings, Visualizing Design, and Creating Construction Documents with SketchUp Pro and LayOut, Michael Brightman
5. Snider, L. (2014). Photoshop CC. Sebastopol, Ca ; O'reilly Media

## THIRD SEMESTER

| **Course Code: DIN 207** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Spatial Planning and Ergonomics** | 0 | 3 | 3 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes:**

| | |
|---|---|
| **CO1** | The Student will be able to relate and Illustrate the anthropometrics and ergonomics in daily life. |
| **CO2** | The Student will be able to understand the stress factors on the human body in various tasks. To develop their understanding of the furniture for different types of works and their effects on the human body. |
| **CO3** | The Student will be able to develop and analyze standard measurement / dimension for a given task and space. |
| **CO4** | The Student will be able to design and evaluate a space as per the given requirement keeping in mind the cognitive and behavioral aspects of humans with respect to ergonomics. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 1 | 2 | | 1 | | 1 | 2 | 1 | 1 |
| **CO2** | | 3 | 2 | 3 | | 1 | 2 | | 2 |
| **CO3** | 2 | 2 | 1 | 3 | 1 | 2 | 2 | | 3 |
| **CO4** | 3 | 2 | 1 | 3 | 2 | 1 | 2 | | 3 |

**Course Content**

Unit I
ANTHROPOMETRY
Introduction to Anthropometry, Basic Human Measurements and body types, Body Percentiles, Body Postures (Static and Dynamic).

Unit II
ERGONOMICS
Ergonomics, Need for study of anthropometric and ergonomics work space envelope- factors in design of work space surfaces, Horizontal and vertical work space surfaces., Physiology (work physiology) and stress. Case studies of activity envelopes in bathroom/ kitchen/ work furniture spaces.

Unit III
INTERIOR SPACE STANDARDS
Understanding Space data development and its relation to work efficiency and human comfort, Creating a standard measurement / dimension for a given task and space.

Unit IV
INTERIOR SPACE PLANNING
Planning and designing multi activity spaces with respect to space standards and physiological and cognitive issues.

**Text Books/ Reference Books:**


1. Neufert, E.(2019). Neufert Architects' Data. (Fifth Edition). Wiley-Blackwell.
2. Dechiara, J., Julius Panero, J., Zelnik, M. (2017). Time-Saver Standards for Interior Design. McGraw-Hill Inc.,
3. Williams, C., Shorrock, S. (2016). Human Factors and Ergonomics in Practice: Improving System Performance and Human Well-Being in the Real World. CRC Press.
4. Sharma, P., S. D. Samantaray, S.D.(2013). Ergonomic System For Interior Decoration. Concept Publishing Co.
5. Chakrabarti, D. (1997). Indian anthropometric dimensions for ergonomic design practice. National Institute of Design.

## THIRD SEMESTER

| **Course Code: DIN 209** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Fundamentals of Interior Graphics** | 0 | 3 | 3 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes [Bloom's Knowledge level (KL)]:**

| | |
|---|---|
| **CO1** | The student will be able to develop an understanding about the interior drawings and its elements. |
| **CO2** | The student will be able to interpret the various interior elements into graphics. |
| **CO3** | The student will be able to formally apply skills of design drawing representation. |
| **CO4** | The student will be able to assess and demonstrate the design graphics skills in design portfolio development. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | 3 | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | | 3 |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 1 | 3 | | 2 |
| **CO4** | | 1 | 2 | 1 | 3 | | 3 | | 2 |

**Course Content**

Unit I
INTERIOR SPACE & MEASURED DRAWING
relevance of interior design drawings for an interior designer. Difference between presentation drawing, construction drawing and working drawing. Various elements of interior space. Measured drawing project. Site Visit.

Unit II
INTERIOR SYMBOLS AND DRAWINGS
Exploring various interior graphic symbols relating to representation of interior elements of a space, wall, ceiling , facade, plants etc.

Unit III
DESIGN REPRESENTATION
Drawing representation with correct denotation of scale and proportions. Use of rendering, entourage to create volume in a drawing.

Unit IV
INTERIOR PORTFOLIO
Relevance of interior portfolio, fundamentals of portfolio design, case studies of professional design portfolios. Creating a brief portfolio of a project.

**Text Books/ Reference Books:**


1. Neufert, E.(2019). Neufert Architects' Data. (Fifth Edition). Wiley-Blackwell.
2. Dechiara, J, Julius Panero, J., Zelnik, M. (2019). Time-Saver Standards for Interior Design. McGraw-Hill Inc., US.
3. Ramstedt, F. (2020). The Interior Design Handbook: Furnish, Decorate, and Style Your Space. Clarkson Potter.
4. Francis D. K. Ching, "Architectural Graphics", John Wiley and Sons, 2012.
5. Maureen Mitton, "Interior Design Visual Presentation: A Guide to graphics, models and Presentation Techniques", 3rd edition, Wiley Publishers, 2017

## THIRD SEMESTER

| **Course Code: DIN 211** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Social and Cultural Factors in Design** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The Student will be able to describe the elements of social and cultural behavior and their relationship to the environment. |
| **CO2** | The Student will be able to interpret the traditional built environment in context with community /neighborhood behavioral patterns. |
| **CO3** | The Student will be able to classify built habitats based on community behavior. To analyze space design with social aspects (like age, gender, ability, economy) and cultural aspects. |
| **CO4** | The Student will be able to apply and infer acquired knowledge of human psychology into interior design projects. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 1 | 2 | | 2 | | | 2 | | |
| **CO2** | 2 | 3 | | 3 | | 1 | 3 | | |
| **CO3** | | 3 | | | | 2 | 3 | | 2 |
| **CO4** | 2 | 3 | 1 | | | 3 | 3 | | 3 |

**Course Content**

Unit I
HUMAN PSYCHOLOGY
Psychology and its relation to built space, Behavior Science, Elements of behavior

Unit II
SOCIETY AND CULTURE
Social and community behavior - Family, gender and group, Community behavior patterns, Culture and elements.

Unit III
DESIGN FACTORS
How society affects design, relation of culture through design, Indian and Global case studies

Unit IV
INTERIOR SPACES AND PSYCHOLOGY
Elements of interiors and its impact on human psychology (proportions, openness etc). Site visits and case studies

**Text Books/ Reference Books:**


1. Daab, R. (2021). High On… Exhibition Design. Loft Publications.
2. Ramstedt, F. (2020). The Interior Design Handbook: Furnish, Decorate, and Style Your Space. Clarkson Potter.
3. Robinson, Lily B. (2020). Research-based programming for interior design. New York: Fairchild Books.
4. Strunk Jr., W. (2020). The Elements of Style. Fingerprint! Publishing.
5. Mittal, N. (2021). The Key of Interior Design (Illustration of Methods & Principles). Standard Book House Since 1960.

**THIRD SEMESTER**

| **Course Code: DIN 213** | L/T | S/P | C |
|---|---|---|---|
| **Subject: History of Interior Design** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The Student will be able to define and explain Traditional Interiors of Indian and western culture. |
| **CO2** | The Student will be able to understand the different styles of vernacular interiors of Northern, Southern India, western classical and Islamic. |
| **CO3** | The Student will be able to identify the impact of western influences on vernacular interiors of India. |
| **CO4** | The Student will be able to analyze Art Movements and Post-Industrialization Impact on interior trends. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | | 2 | 1 | | | 2 | 2 | 1 | |
| **CO2** | | 2 | 1 | | | 2 | 2 | 1 | |
| **CO3** | | 2 | 1 | | | 2 | 2 | 1 | |
| **CO4** | | 3 | 1 | | | 2 | 2 | 1 | |

**Course Content**

Unit I
HINDU INTERIORS OF NORTHERN AND SOUTHERN REGIONS OF INDIA
Forms spatial planning, Cultural aspects, Symbolism, Color, Art., Materials of interior construction and design technique, Characteristics and salient features

Unit II
WESTERN CLASSICAL INTERIORS
Forms spatial planning, Cultural aspects, Symbolism, Color, Art., Materials of interior construction and design technique, Characteristics and salient features

Unit III
ISLAMIC INTERIORS
Forms spatial planning, Cultural aspects, Symbolism, Color, Art., Materials of interior construction and design technique, Characteristics and salient features

Unit IV
ART MOVEMENTS AND POST-INDUSTRIALIZATION IMPACT ON INTERIORS
Forms spatial planning, Cultural aspects, Symbolism, Color, Art., Materials of interior construction and design technique, Characteristics and salient features

**Text Books/ Reference Books:**


1. Hillenbrand, R.(2021). Islamic Art and Architecture: A Critical History. Thames and Hudson.
2. Fletcher. (1999). Sir Banister Fletcher's: History of Architecture. CBS.
3. Anon. (2012). An Illustrated Handbook of Hindu Temple Architecture - The Temples of Northern and Southern India. Read Books.
4. T. Gray, G. (2022). An Introduction to the History of Architecture, Art & Design. Sunway University Press.
5. Ireland, J. (2018). History of Interior Design. Fairchild Books.

**FOURTH SEMESTER**

| **Course Code: DIN 202** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Interior Design Project-II** | 0 | 8 | 8 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The Student will be able to Demonstrate and Illustrate research-based knowledge and methods including context analysis, case studies of sustainable designs, project requirements and synthesis of information to provide context specific solutions. |
| **CO2** | The Student will be able to interpret how design can impact, interact with, and improve environments while developing an understanding of space to human relation in context to limited user/ formal space. |
| **CO3** | The Student will be able to formally apply methods of spatial planning & design, functionality and aesthetics to a small scale project with constraints of site and context, applying the knowledge of selected themes, local materials & sustainability. |
| **CO4** | The Student will be able to Assimilate and Apply learning of the interior design process. To demonstrate basic skills of drawings and representation for developing an illustrative interior design portfolio. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | 3 | | | 2 | 1 | 2 | | |
| **CO2** | 3 | 3 | 3 | 2 | | 3 | 2 | | 3 |
| **CO3** | 2 | 2 | 3 | 2 | | 2 | 3 | | 3 |
| **CO4** | 2 | 1 | 2 | 2 | 3 | 1 | 2 | 3 | |

**Course Content**

Unit I
RESEARCH AND DOCUMENTATION
Understanding/Insight/Perception – Generating the insight for Context, Sustainability, Purpose, Motivation, End User etc. Action Research -Literature Study, Site Analysis, climatic setting, Case Study, site visit.

Unit II
CREATING BRIEF FOR MINOR & MAJOR PROJECTS
Preparation of design requirements, area requirements based on standards and their interrelation and circulation patterns.

Unit III
CONCEPT DEVELOPMENT
Understanding and generating the idea, its expression in different methods using manual, digital media etc., Schematic Design development with spatial planning, Mock up models and visualizations with materials.

Unit IV
DESIGN DEVELOPMENT & PORTFOLIO DESIGN
Design development (on appropriate scale)- double line representations of drawings, Expression of the design through 3d Model development on appropriate scale and materials, Design communication & Final portfolio submission (manual or digital output)

**Text Books/ Reference Books:**


1. Neufert, E.(2019). Neufert Architects' Data. (Fifth Edition). Wiley-Blackwell.
2. Dechiara, J, Julius Panero, J., Zelnik, M. (2019). Time-Saver Standards for Interior Design. McGraw-Hill Inc., US.
3. Ramstedt, F. (2020). The Interior Design Handbook: Furnish, Decorate, and Style Your Space. Clarkson Potter.
4. Tillotsum, G.H.R. (2021). The tradition of Indian Architecture Continuity, Controversy – Change since 1850. Yale University Press.
5. Rangwala, S.C. (2022). Building Construction. Charotar Pub. House.

**FOURTH SEMESTER**

| **Course Code: DIN 204** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Interior Material –II** | 2 | 4 | 6 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The Student will be able to understand the basics of arch construction in stone and brick. |
| **CO2** | The Student will be able to explain various construction details of substructure and superstructure in timber construction. |
| **CO3** | The Student will be able to identify and categorize timber doors and windows along with its components and make their construction details. |
| **CO4** | The Student will be able to categorize and assess various construction details in timber. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | 2 | 3 | | 2 | 1 | 3 | 2 | |
| **CO2** | | 2 | 2 | | 2 | 3 | 2 | 2 | |
| **CO3** | | 2 | 1 | 2 | 2 | | 3 | 2 | |
| **CO4** | 3 | | 1 | 3 | 2 | 1 | 3 | 2 | |

**Course Content**

Unit I
BRICK & STONE ARCHES
Elementary principles of Arch construction, Definition of various technical terms, and Components of arch.
Types of Arch – Flat, Segmental, Semi-circular etc. Exposure to site OR practicing in construction yards by making examples of Arches and brick masonry.

Unit II
TIMBER CONSTRUCTION
Timber used as a building material, Types, advantages and disadvantages of Timber, Manufacturing process of timber, Characteristics, Defects & Preservation methods. Technical terms, classification of joints, Joinery details Exposure to site OR Practicing different types of timber joinery in wood workshops.

Unit III
GLASS AS MATERIALS & TIMBER DOORS
Glass types, advantages and disadvantages & ; Manufacturing process Design considerations, Location of doors, design of different types of wooden doors and its construction details Sliding doors & ; its construction details. Market Survey, industrial timber: Veneer, Plywood ,Sunmica, Laminates, Block board, particle board, fiber board etc. Hardware- Hinges, Handles, Knobs, Bolts, L- drops, Locks, Stoppers, Stays, Silencers, Chain guards, Closers, Catchers, Knockers etc. in various materials.

Unit IV
WINDOWS AND HARDWARE
Advantages & disadvantages , grades, uses, Design considerations , location of windows, fully glazed window, louvered, centrally pivoted, top hung windows, side hung, partly glazed, Joinery details of timber frame, style, rails, panels, fixing of glass, double glazing etc. Fixtures and fastenings. Market Survey of different types of windows and materials available in the market like PVC, Metal, Timber etc.

**Text Books/ Reference Books:**

1. McKay (2013). Building Construction: Metric Volume 1, 2, 3, 4 (4th Edition). Pearson Education India.
2. Ching, F.D.K. (2020). Building Construction Illustrated (6th Edition). Wiley
3. Barry, R. (1999). The Construction Of Buildings Vol 1, 2, 3, 4. Wiley–Blackwell
4. Rangwala, S.C. (2022). Building Construction. Charotar Pub. House.
5. Kingsley, D.B. (2020). Hand drafting for interior design. New York: Fairchild books.

## FOURTH SEMESTER

| **Course Code: DIN 206** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Digital Modelling in Interiors-II** | 0 | 4 | 4 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The Student will be able to define the concepts of advanced 3Dmodeling.To demonstrate experimentation with forms, mapping, rendering and presentation techniques. |
| **CO2** | The Student will be able to build practical skills in the computer graphic software for design presentation. |
| **CO3** | The Student will be able to develop skills in experimentation, critical analysis and compare for the discriminatory selection of computer software for specific end uses as per the functional and aesthetic requirements of interior design. |
| **CO4** | The Student will be able to assess Knowledge and understanding of digital rendering skills and its relevance in Interior Design. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | | | 3 | | 2 | | 2 | 3 | |
| **CO2** | | 2 | | | 3 | | 2 | 3 | |
| **CO3** | | | 3 | | 3 | | 2 | 3 | |
| **CO4** | | | 2 | | 3 | 2 | 3 | 3 | |

**Course Content**

Unit I
ADVANCED SOLID MODELING
Introduction to advanced 3d Modeling software, Complex tools and methods in 3D Modeling. (Advanced 3D Software). User Interface and basic working, Nurbs transformational tools

Unit II
ADVANCED SOLID MODELING PLUGINS
Draw and create a complete set of interior views using 3D render Camera, walk through the layout, lighting, materials, etc.

Unit III
RENDERING
Lighting cameras and render effects, environment mapping fog and atmospheres.

Unit IV
FINAL RENDER OUTPUT
Final Project output in various Image formats.

**Text Books/ Reference Books:**


1. Kim, E.M., Jinmo Rhee, J. (2019). Digital Media Series: Rhinoceros: 1. Kim, E.M., Jinmo Rhee, J.(Independently published).
2. Marco, G.D. (2018). Simplified Complexity (Method for Advanced NURBS Modeling). Le Penseur.
3. Bachman, D.(2017). Grasshopper: Visual Scripting for Rhinoceros 3D (First Edition). Industrial Press Inc.,U.S.
4. Tedeschi, A. and Andreani, S. (2014). AAD, Algorithms-aided Design: Parametric Strategies Using Grasshopper. Le Penseur

## FOURTH SEMESTER

| **Paper code: DIN 208** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Furniture Design and Prototyping** | 0 | 4 | 4 |

**Marking Scheme (NUES):**
Teachers Continuous Evaluation: 100 Marks

**Course Outcomes:**

| | |
|---|---|
| **CO1** | The Student will be able to list and classify furniture with their correlation in any specific place of use. |
| **CO2** | The Student will be able to demonstrate intrinsic knowledge of the various kinds of furniture in any set of space and develop the understanding of the appropriateness of the type of material required. |
| **CO3** | The student will be able to apply design processes for furniture conceptualization and analyze furniture respecting the physical properties of the respective materials considered. |
| **CO4** | The Student will be able to vividly assess the visual and physical communication of furniture with the user and design furniture using various traditional and modern technologies. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 1 | 1 | 2 | 3 | | 2 | 3 | | 1 |
| **CO2** | 3 | 2 | | 2 | | | 3 | | 2 |
| **CO3** | 3 | | 3 | | 2 | | 3 | | 2 |
| **CO4** | | | 3 | 3 | 2 | | 3 | 3 | |

**Course Content**

Unit I
EVOLUTION OF FURNITURE DESIGN
History of Furniture Design, Furniture design movements. Discussion on Function, comfort and anthropometrics for various categories of furniture.

Unit II
FURNITURE FUNDAMENTALS, FUNCTIONS AND FORMS
Principal for Furniture design, Form ,Spatial Organization & types of furniture, Study of various furniture Residential, Outdoor, Commercial sites.

UNIT III
FURNITURE & PROTOTYPING
Understanding and Making of Basic furniture, Assembly, Sustainable furniture, Furniture Joinery and Hardware.

Unit IV
INNOVATIVE FURNITURE PROTOTYPING
Modern innovative techniques of form generation and prototyping, Conceptualization, Form Generation and Theme board, Final designed Prototype and post Design Analysis

**Text Books/ Reference Books:**


1. Robert W. Lang (2020). Great Book of Shop Drawings for Craftsman Furniture, Revised & Expanded Second Edition: Authentic and Fully Detailed Plans for 61 Classic Pieces (Fox Chapel Publishing) Complete Full-Perspective Views. Fox Chapel Publishing.
2. Kries, M., Eisenbrand, J., Bassi, A., Ferrari, F., Máčel, O., Pavitt, J., Roode, I.d , Rossi, C., Rüegg, A., Sparke, P., Sudjic, D., Tegethoff, W., Thau, C., Vindum, K., Ward, G.W.R. (2019). Atlas of Furniture Design. Vitra Design Museum.
3. Ching, F.D.K., Corky Binggeli, C. (2018). Interior Design Illustrated (4th Edn.). Wiley.
4. Mcelroy, K.(2017). Prototyping for Designers: Developing the Best Digital and Physical Products. O′Reilly.
5. Lovell, S.(2009). Limited Edition: Prototypes, One-Offs and Design Art Furniture. Birkhauser.

## FOURTH SEMESTER

| **Course Code: DIN 210** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Integration of Services in Interiors** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The Student will be able to demonstrate an understanding of the different types of Services in the Building Interior System. To understand the working of various types of Services in the Building System. |
| **CO2** | The Student will be able to apply the knowledge of interior building Services in interior projects and list their material specification and quantities. |
| **CO3** | The Student will be able to assess various services layouts. |
| **CO4** | The Student will be able to adapt understanding of services in interior design projects. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | 2 | | | | 1 | 1 | | |
| **CO2** | 2 | 2 | 2 | | | 1 | 3 | | 1 |
| **CO3** | 2 | 3 | | 1 | | 2 | 3 | 1 | 2 |
| **CO4** | 2 | 2 | 1 | 1 | | 2 | 3 | | 2 |

**Course Content**

Unit I
WATER SUPPLY AND DRAINAGE SYSTEM
Water Supply and Drainage plumbing systems, Pipes and valves

Unit II
FIRE FIGHTING SYSTEM
Causes and spread of fire, Combustibility of materials and safety norms, Fire resistant materials, Fire Detector, Sprinkler systems

UNIT III
AIR CONDITIONING SYSTEM
Principles of Air conditioning, HVAC systems, Mechanical air conditioning and ventilation, Air distribution system-fans, filters, ductwork, outlets, dampers.

Unit IV
INTERIOR SERVICES AND DRAWINGS
Analysis of the basic services in 1-Floors 2-Walls 3-Ceilings, Analysis of the drawings of the basic interior services in an ongoing project. Site visits

**Text Books/ Reference Books:**


1. Rangwala (2016). Water Supply and Sanitary Engineering. Charotar Publishing House Pvt. Ltd.
2. Hall, F., Greeno, R. (2013). Building Services Handbook. Routledge.
3. Janis, R.R., Tao, W.K.Y. (2013). Mechanical And Electrical Systems in Buildings (5th Edition). Pearson Prentice Hall.
4. Patil, S.M. (2014). Building Services. Standard Publishers Distributors.
5. Saleem, R. (2022). Electrical Design for Buildings (Beginner Level): An Unique Study Material for Electrical Designers. (Independently published).

**FOURTH SEMESTER**

| **Course Code: DIN 212** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Color Context in Interior Spaces** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The Student will be able to recall and interpret the qualities of color and color schemes. |
| **CO2** | The Student will be able to relate between color and human psychology. |
| **CO3** | The Student will be able to identify various ways of introducing colors and textures in a space. |
| **CO4** | The Student will be able to apply acquired knowledge of color and furnishings into interior design projects and analyze the relation between the designed spaces with color psychology. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | | 2 | | | | 2 | 1 | | |
| **CO2** | | 2 | | 1 | | 2 | 1 | | 1 |
| **CO3** | | 2 | 2 | 3 | | 2 | 3 | | 2 |
| **CO4** | 2 | 2 | 3 | 3 | | 3 | 3 | 1 | 2 |

**Course Content**

Unit I
COLOR TERMINOLOGY
Definition, Qualities and properties of color. Dimensions of color, Hue, Value, Intensity.
The color wheel, Systems - Prang color system, Munsell color system. Psychologist color chart and physicist color chart. Psychological effects of color. Effects of light on color.

Unit II
PRINCIPLES OF DESIGN IN INTERIOR DESIGN
Harmony, proportion, balance, rhythm and emphasis. Color vs. Daylight and Artificial light.
Color temperature, color psychology. Light reflection / Absorption and color. Color & Texture as an important decor element .Color schemes related to color harmony & Complementary color harmony.

Unit III
INTERIOR FURNISHING
Color & Texture in space elements like walls, furnishings, furniture and various surfaces. Analyzing its impact on users with color and texture psychology. Application of art principles related to Home furnishing.

Unit IV
PAINT PALETTES
Painting and Prepare color Palettes. Painting and lighting different rooms with various color harmonies. Color in space elements like walls, furnishings, furniture and various surfaces. Application of art principles, color and textures to Home furnishing.

**Text Books/ Reference Books:**

1. Phaidon Editors, Stella Paul, S., India Mahdavi, I. (2021). Living in Color: Color in Contemporary Interior Design. Phaidon Press.
2. Lindenau, A. (2020). The Art and Science of Color in Holistic Interior Design: A Crash Course. Lindenau, A. (Independently Published).
3. Ronald Reed, R. (2021). Color Plus Design: Transforming Interior Space - Bundle Book + Studio Access Card. Fairchild Books.
4. Starmer, A. (2012). The Color Scheme Bible: Inspirational Palettes for Designing Home Interiors. Firefly Books Ltd.
5. Lewis, A., Chen, C. (2020). Made For Living: Collected Interiors for All Sorts of Styles. Clarkson Potter.

**FIFTH SEMESTER**

| **Course Code: DIN 301** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Interior Design Project-III** | 0 | 10 | 10 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to Demonstrate and Illustrate research-based knowledge and methods including context analysis case studies of interior design trends, projects, project requirements and synthesis of information to provide context specific solutions. |
| **CO2** | The student will be able to interpret how design can impact, interact with, and improve environments while developing an understanding of space to human relations (multiple users) in context to public spaces (Hospital spaces/ restaurants/ recreational spaces/ health and fitness etc.) |
| **CO3** | The student will be able to formally apply methods of spatial planning & design, functionality and aesthetics to a small to medium scale project with constraints of site and context applying the knowledge of selected theme, materials, sustainability and climatic impact on the design project. |
| **CO4** | The student will be able to Assimilate and Apply learning of materials, construction and computers to create interior projects. To demonstrate Advanced skills in drawings and representation for developing an illustrative interior design portfolio. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | 3 | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | | 3 |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 1 | 3 | | 2 |
| **CO4** | | 1 | 2 | 1 | 3 | | 3 | | 2 |

**Course Content**

Unit I
RESEARCH & DOCUMENTATION
Understanding/Insight/Perception – Generating insight for Context, Sustainability, Purpose, Motivation, End User etc. Action Research -Literature Study, Site Analysis, climatic setting, Case Study.Site visit.

Unit II
BRIEF & DESIGN REQUIREMENTS
Preparation of brief, design requirements, area requirements based on standards and their interrelation and circulation patterns.

Unit III
CONCEPT DEVELOPMENT
Understanding and generating the idea, its expression in different methods using manual, digital media etc., Schematic Design development with spatial planning, Mock up models and visualizations with materials.

Unit IV
DESIGN DEVELOPMENT & PORTFOLIO DESIGN
Design development (on an appropriate scale)- double line representations of drawings, Expression of the design through 3D Model development on appropriate scale and materials, Design communication & Final portfolio submission (manual or digital output)

**Text Books/ Reference Books:**


1. Neufert, E.(2019). Neufert Architects' Data. (Fifth Edition). Wiley-Blackwell.
2. Dechiara, J, Julius Panero, J., Zelnik, M. (2019). Time-Saver Standards for Interior Design. McGraw-Hill Inc., US.
3. Ramstedt, F. (2020). The Interior Design Handbook: Furnish, Decorate, and Style Your Space. Clarkson Potter.
4. Tillotsum, G.H.R. (2021). The tradition of Indian Architecture Continuity, Controversy – Change since 1850. Yale University Press.
5. Rangwala, S.C. (2022). Building Construction. Charotar Pub. House.

## FIFTH SEMESTER

| **Course Code: DIN 303** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Interior Material-III** | 0 | 6 | 6 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to understand the functions and types of interior partitions. |
| **CO2** | The student will be able to comprehend the standard nomenclature and classify the various types of staircases. |
| **CO3** | The student will be able to develop an understanding of various details of false ceilings & finishes. |
| **CO4** | The student will be able to develop and list on-site knowledge of various interior building materials and finishes. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | | 2 | 1 | 2 | 2 | 1 | | | |
| **CO2** | 1 | 2 | 1 | 2 | 2 | 1 | | | |
| **CO3** | | 2 | 1 | 2 | 2 | 1 | | | |
| **CO4** | 3 | 3 | 2 | 3 | | 2 | 1 | | 2 |

**Course Content**

Unit I
PARTITIONS
Partitioning methods with the use of different materials e.g. Timber and Timber Products, Brick / Block, Pre-cast Concrete Block, Cement Board, Compressed Straw Board, Glass and Glass Brick, Gypsum board, Market Survey/Case Study. Site Visit.

Unit II
STAIRCASES
Introduction, technical terms, calculations, requirements of a good staircase, Classification and materials of staircase, RCC Staircase, Handrails, joints, and materials.

Unit III
FALSE CEILING
Introduction to different types of False ceilings and their materials, Gypsum Products Introduction - Gypsum Board, Suspended Ceiling (Board & Tiles). Construction details of different false ceilings, Market Survey/Case Study.

Unit IV
WALL AND FLOOR FINISHES
Floor & Floor Finishes, Brick, Cement Concrete, Stone, Terrazzo, Chequered Tile, Ceramic Tile, Vitrified Tiles, Wooden, Wall finishes- Gypsum Plaster, Components and Accessories, Jointing and Finishing. Waterproofing, Paints and Plaster, Materials and Details of Cladding -wet and dry in different materials, market research.

**Text Books/ References:**


1. McKay (2013). Building Construction: Metric Volume 1, 2, 3, 4(4th Edition). Pearson Education India.
2. Ching, F.D.K. (2020). Building Construction Illustrated (6th Edition). Wiley
3. Barry, R. (1999).The Construction Of Buildings Vol 1, 2, 3, 4. Wiley–Blackwell
4. Rethaliya, Dr.R.P. (2019). Building Construction Technology. Atul Prakashan
5. Chudley, R., Greeno, R.,Kovac, K. (2020). Chudley and Greeno's Building Construction Handbook.

## FIFTH SEMESTER

| **Course Code: DIN 305** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Advanced Interior Rendering & Software Application** | 0 | 4 | 4 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes:**

| | |
|---|---|
| **CO1** | The student will be able to list and demonstrate Knowledge and understanding of advanced digital rendering skills and their relevance in Interior Design. |
| **CO2** | The student will be able to demonstrate practical skills in advanced computer graphic software for design presentations. |
| **CO3** | The student will be able to illustrate advanced skills in experimentation, critical analysis and recommend the discriminatory selection of computer software for specific end uses. |
| **CO4** | The student will be able to adapt software skills and create virtual renders as per the functional and aesthetic requirements of interior design in virtual environments. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | | | 3 | | 2 | | 2 | 3 | |
| **CO2** | | 2 | | | 3 | | 2 | 3 | |
| **CO3** | | | 3 | | 3 | | 2 | 3 | |
| **CO4** | | | 2 | | 3 | 2 | 3 | 3 | |

**Course Content**

Unit I
ADVANCED SOLID MODELING
Draw and create a complete set of interior views using parametric software and related render Camera, walk through the layout, lighting, materials, etc. using current trending advanced modeling and rendering software.

Unit II
ADVANCED RENDERING
Lighting cameras and render effects, environment mapping fog and atmospheres as per the international trend of digital design in interiors.

Unit III
AI AND CODING FOR DIGITAL DESIGN IN INTERIORS
Exploring the trend of Artificial Intelligence and virtual Rendering in interiors.

Unit IV
DIGITAL PORTFOLIO
Final Render Output and Final Project output in various Image & Video formats.

**Text Books/ Reference Books:**


1. Kim, E.M., Jinmo Rhee, J. (2019). Digital Media Series: Rhinoceros: 1. Kim, E.M., Jinmo Rhee, J.(Independently published).
2. Marco, G.D. (2018). Simplified Complexity (Method for Advanced NURBS Modeling). Le Penseur.
3. Bachman, D.(2019). Grasshopper: Visual Scripting for Rhinoceros 3D (First Edition). Industrial Press Inc.,U.S.
4. Tedeschi, A. and Andreani, S. (2019). AAD, Algorithms-aided Design: Parametric Strategies Using Grasshopper. Le Penseur
5. Ramstedt, F. (2020). The Interior Design Handbook: Furnish, Decorate, and Style Your Space. Clarkson Potter.

**FIFTH SEMESTER**

| **Course Code: DIN 307** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Interior Décor and Surface Finishes** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to develop knowledge and demonstrate an understanding of various interior materials and finishes. |
| **CO2** | The student will be able to acquire and articulate an understanding of the knowledge of interior materials, their properties and their application. |
| **CO3** | The student will be able to apply skills in experimentation, critical analysis and selecting appropriate material for interior design projects. |
| **CO4** | The student will be able to illustrate and list on-site knowledge of various interior materials and finishes available in the market. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | 2 | | | | 1 | 1 | | |
| **CO2** | 2 | 2 | 2 | | | 1 | 3 | | 1 |
| **CO3** | 2 | 3 | | 1 | | 2 | 3 | 1 | 2 |
| **CO4** | 2 | 2 | 1 | 1 | | 2 | 3 | | 2 |

**Course Content**

Unit I

CONTEMPORARY MATERIALS

Physical, behavioral and visual properties of the materials and their use in the construction of floors, walls, ceilings, doors, windows, staircases, built-in furniture and other components of interior architecture. Wood Derivatives in Interiors, metals, Glass, Stones and tiles. (Site Visits)

Unit II

WALL FINISHES

Brick wall, wooden wall, stone wall, pavestone wall, Partition wall, Movable partitions, Boundary wall, Shared walls, Portable walls and wall coverings – Painting, wall covering and paneling, Painting, Wallpaper

Unit III

FLOOR & CEILING FINISHES

Types of floors, Hard floorings: Stone, wood, tile etc. and Soft flooring - carpet, rugs. Treatment of ceilings and False Ceiling, types of ceiling materials. Other innovative materials. Construction terminology and details.

Unit IV

METALS & HARDWARE

Properties of Metals, Hardware & Accessories: all hardware required for residences, offices, other public & private spaces, etc., including all types of hinges, drawer slides, handles, locks, wire managers, etc., accessories for toilet, kitchen, office, glass patch fittings, profiles, etc. (Site Visits).

**Text Books/ Reference Books:**


1. Ching, F.D.K. (2020). Building Construction Illustrated (6th Edition). Wiley
2. Barry, R. (1999).The Construction Of Buildings Vol 1, 2, 3, 4. Wiley–Blackwell
3. Ramstedt, F. (2020). The Interior Design Handbook: Furnish, Decorate, and Style Your Space. Clarkson Potter.
4. Rangwala, S.C. (2022). Building Construction. Charotar Pub. House.
5. Rethaliya, Dr.R.P. (2019). Building Construction Technology. Atul Prakashan

## FIFTH SEMESTER

| **Course Code: DIN 309** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Introduction to Lighting and Acoustics** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to demonstrate an understanding of the different types of Services in the Building Interior System. To understand the workings of various types of Services in the Building System. |
| **CO2** | The student will be able to illustrate and relate to the knowledge of interior building Services in interior projects and list their material specifications and quantities. |
| **CO3** | The student will be able to explain various services layouts. |
| **CO4** | The student will be able to illustrate the understanding of services in interior design projects. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | 2 | | | | 1 | 1 | | |
| **CO2** | 2 | 2 | 2 | | | 1 | 3 | | 1 |
| **CO3** | 2 | 3 | | 1 | | 2 | 3 | 1 | 2 |
| **CO4** | 2 | 2 | 1 | 1 | | 2 | 3 | | 2 |

**Course Content**

Unit I
ELECTRICAL SERVICES
Electrical supply in a building, Types of wires, wiring systems and conduits, Fixing of electrical fixtures and switches.

Unit II
LIGHTS AND LIGHTING FIXTURES
Basics of illumination, Glare, Factors affecting visual tasks, Classification of lighting – Artificial light sources, Color temperature, Choice of luminaries. types of lights and Lighting fixtures.

Unit III
ACOUSTICS
Introduction to Acoustics, Origin of sound, propagation of sound, Behavior of sound, Acoustic materials, Surface treatment, Sound absorbing materials & their properties.

Unit IV
INTERIOR SERVICES AND DRAWINGS
Analysis of the basic services in 1-Floors 2-Walls 3-Ceilings, Analysis of the drawings of the basic interior services in an ongoing project. Site visits.

**Text Books/ Reference Books:**


1. Kilmer, R., Kilmer, W.O. (2021). Construction Drawings and Details for Interiors (Fourth Edition). Wiley.
2. Hall, F., Greeno, R. (2013). Building Services Handbook. Routledge.
3. Janis, R.R., Tao, W.K.Y. (2013). Mechanical And Electrical Systems in Buildings (5th Edition). Pearson Prentice Hall.
4. Patil, S.M. (2014). Building Services. Standard Publishers Distributors.
5. Saleem, R. (2022). Electrical Design for Buildings (Beginner Level): An Unique Study Material for Electrical Designers. (Independently published).

## FIFTH SEMESTER (PROGRAM CORE ELECTIVE)

| **Course Code: DIN 311** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Basic of Vastu Shastra for Interiors** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to define and relate to the fundamental principles and concepts of Vastu. |
| **CO2** | The student will be able to demonstrate and develop basic technical skills required in the study of Vastu. |
| **CO3** | The student will be able to identify various vastu principles in varied interior design projects. |
| **CO4** | The student will be able to apply the acquired skills as an interior design professional and analyze the relevance of vastu in their Design Project. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | 2 | | | | 1 | 1 | | |
| **CO2** | 2 | 2 | 2 | | | 1 | 3 | | 1 |
| **CO3** | 2 | 3 | | 1 | | 2 | 3 | 1 | 2 |
| **CO4** | 2 | 2 | 1 | 1 | | 2 | 3 | | 2 |

**Course Content**

Unit I
INTRODUCTION TO INDIAN VASTU SHASTRA
Importance of Vastu for Interior Designers, Vastu purusha, concept of Ayadi, various measurements in Vastu.

Unit II
VASTU FOR RESIDENTIAL INTERIORS
Entrances in Vastu , Residence planning, Puja room, bedroom, kitchen, children room, store, Decluttering, study room, Interior object allocation as per Vastu.

Unit III
VASTU FOR COMMERCIAL AND OFFICE INTERIORS
Entrances, planning of space, interior object allocation as per Vastu.

Unit IV
CASE STUDIES
Case studies to analyze various projects for application of Vastu.

**Text Books/ Reference Books:**


1. Vastu- The User‟s Manual, Prabhakar, L.U, The Avenue Press, Chennai, 1998.
2. Sherri Silverman (2007), Vastu: Transcendental Home Design in Harmony with Nature, Gibbs Smith, Utah, ISBN 978-1423601326
3. Gautum, Jagdish (2006). Latest Vastu Shastra (Some Secrets). Abhinav Publications. p. 17. ISBN 978-81-7017-449-3.
4. Cheng Jian Jun and Adriana Fernandes-Gonçalves. Chinese Feng Shui Compass: Step by Step Guide. 1998: 21
5. Vibhuti Chakrabarti (2013). Indian Architectural Theory and Practice: Contemporary Uses of Vastu Vidya. Routledge. pp. 1–2. ISBN 978-1-136-77882-7

## FIFTH SEMESTER (PROGRAM CORE ELECTIVE)

| **Course Code: DIN 313** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Inclusive Interiors** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to recall various user groups for inclusivity. |
| **CO2** | The student will be able to demonstrate and develop understanding of the fundamental principles and concepts of designing for inclusivity. |
| **CO3** | The student will be able to analyze various space requirements for specially abled. |
| **CO4** | The student will be able to apply the acquired skills and knowledge as an Interior Designer to design sensitively for varied user groups. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | 2 | | | | 1 | 1 | | |
| **CO2** | 2 | 2 | 2 | | | 1 | 3 | | 1 |
| **CO3** | 2 | 3 | | 1 | | 2 | 3 | 1 | 2 |
| **CO4** | 2 | 2 | 1 | 1 | | 2 | 3 | | 2 |

**Course Content**

Unit I
DESIGN FOR INCLUSIVITY
Understanding Inclusivity and various terms associated. Understanding the user group. Study of existing problems - some reflections of the problems Scope and objectives. Relevance of designing for inclusivity.

Unit II
INCLUSIVE INTERIORS FOR SPECIALLY ABLED
Housing and space requirements for various specially abled user group, ergonomics and space standards, interior space requirements

Unit III
INCLUSIVITY IN AGE AND GENDER
understanding differences in Housing and space requirements for elderly, young, gender inclusivity. ergonomics and space standards, interior space requirements

Unit IV
INCLUSIVE PRIVATE AND PUBLIC INTERIORS
Ergonomic Factors &. Anthropometries Data, Circulation, Work Surfaces for Different Functions in private and public interior context for kitchens, toilets and circulations

**Text Books/ Reference Books:**

1. CPWD Guidelines for Space Standards for Barrier Free Built Environment for Disabled & Elderly Persons, CPWD, New Delhi.
2. Joseph De Chiara et.al., Time Saver Standards for Building Types, McGraw Hill International, Singapore, 3rd, Singapore, 1995.
3. Joseph De Chiara et.al., Time Saver Standards for Housing & Residential Development, McGraw Hill International Singapore, 3rded. 1995
4. Neufert, E.(2019). Neufert Architects' Data. (Fifth Edition). Wiley-Blackwell.
5. Dechiara, J., Julius Panero, J., Zelnik, M. (2017). Time-Saver Standards for Interior Design. McGraw-Hill Inc., US.

## FIFTH SEMESTER (PROGRAM CORE ELECTIVE)

| **Course Code: DIN 315** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Sustainable Interiors** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to define and relate to the fundamental principles and concepts of sustainable interiors. |
| **CO2** | The student will be able to demonstrate and develop knowledge of vernacular interiors. |
| **CO3** | The student will be able to identify various crafts. |
| **CO4** | The student will be able to apply the acquired knowledge as an Interior Design professional and analyze the application of craft in interiors. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | 2 | | | | 1 | 1 | | |
| **CO2** | 2 | 2 | 2 | | | 1 | 3 | | 1 |
| **CO3** | 2 | 3 | | 1 | | 2 | 3 | 1 | 2 |
| **CO4** | 2 | 2 | 1 | 1 | | 2 | 3 | | 2 |

**Course Content**

Unit I
SUSTAINABLE INTERIORS
Importance of Sustainability in Interior Design. Principles of sustainable design. Evaluation of sustainable materials and process of application.

Unit II
VERNACULAR INTERIORS
Elements of style, materials and concepts of interiors in vernacular architecture across North and South India and the world. Vernacular building materials. Case studies/ Site visits.

Unit III
CRAFT AND SUSTAINABILITY
Elements of style, materials and concepts of various arts and crafts across North and South India and the world. Assessing its sustainability and application. Case studies/ Site visits.

Unit IV
ADAPTATION OF CRAFTS IN INTERIORS
Assess the likely sources of stylistic and decorative features of vernacular interiors and art -craft and employ these to assist in analyzing their application and possibilities in current Interior Design practice .

**Text Books/ Reference Books:**


1. Sustainability in Interior Design by Sian Moxon , Lawrence King Publishing , 2012
2. Sustainable Design for Interior Environments, second Edition, Susan M.Winchip, 2007
3. The sustainable design book by Rebecca proctor, Lawrence King Publishing 2015
4. Carol Stangler, The crafts and art of Bamboo, Rev. updated edition, Lark books, 2009.
5. Crafts in Interior Architecture; India. 1990 Onwards, Rishav jain, 2015


## SIXTH SEMESTER

Syllabus of B. Des IN 1st to 8th approved at 7th Sub Committee AC -29th July'2024 & at 9th Meeting of Board of Studies of USDI -21st June' 2024. w.e.f. Academic session 2024-25 for batch 2024 onwards.

| **Course Code: DIN 302** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Interior Design Project-IV** | 0 | 10 | 10 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to Demonstrate and Illustrate research-based knowledge and methods including context analysis, case studies of interior design trends, projects, project requirements and the synthesis of information to provide context specific solutions. |
| **CO2** | The student will be able to interpret how design can impact, interact with, and improve environments while developing an understanding of space with respect to human relation in the context of public spaces with displays like exhibitions, fairs, and museums. |
| **CO3** | The student will be able to formally apply methods of spatial planning and design, functionality and aesthetics to a small to medium scale project with constraints of site and context applying knowledge of selected themes, materials, sustainability and climatic impact on the design project. |
| **CO4** | The student will be able to Assimilate and Apply learning of materials, construction and computers and create interior projects. To demonstrate Advanced skills in drawings and representation for developing an illustrative interior design portfolio. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | 3 | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | | 3 |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 1 | 3 | | 2 |
| **CO4** | | 1 | 2 | 1 | 3 | | 3 | | 2 |

**Course Content**

Unit I
RESEARCH AND DOCUMENTATION
Understanding/Insight/Perception – Generating insight for Context, Sustainability, Purpose, Motivation, End User etc. Action Research -Literature Study, Site Analysis, climatic setting, Case Study, site visit.

Unit II
BRIEF & DESIGN REQUIREMENTS
Preparation of design requirements and brief, area requirements based on standards and their interrelationship and circulation patterns.

Unit III
CONCEPT DEVELOPMENT
Understanding and generating the idea, its expression in different methods using manual, digital media etc., Schematic Design development with spatial planning, Mock up models and visualizations with materials.

Unit IV
DESIGN DEVELOPMENT & PORTFOLIO DESIGN
Design development (on an appropriate scale)- double line representations of drawings, Expression of the design through 3d Model development on appropriate scale and materials, Design communication & Final portfolio submission (manual or digital output).

**Text Books/ Reference Books:**


1. Neufert, E.(2019). Neufert Architects' Data. (Fifth Edition). Wiley-Blackwell.
2. Dechiara, J, Julius Panero, J., Zelnik, M. (2017). Time-Saver Standards for Interior Design. McGraw-Hill Inc., US.
3. Ramstedt, F. (2020). The Interior Design Handbook: Furnish, Decorate, and Style Your Space. Clarkson Potter.
4. Tillotsum, G.H.R. (2021). The tradition of Indian Architecture Continuity, Controversy – Change since 1850. Yale University Press.
5. Rangwala, S.C. (2022). Building Construction. Charotar Pub. House.

## SIXTH SEMESTER

| **Course Code: DIN 304** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Interior Lighting and Services Design** | 0 | 4 | 4 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to explore and classify the different types of Electrical and Lighting Services in Interior Building System. |
| **CO2** | The student will be able to classify the primary types of lamps and fixtures used in interior applications and make use of their applications and pros/cons. |
| **CO3** | The student will be able to analyze theories of physical and physiological factors of light and their relationship to human behavior and the interior environment. The Student will be able to formally apply methods of spatial planning & design, functionality and aesthetics to a small-scale project with interior building services to make an aesthetic and functional project. |
| **CO4** | The student will be able to interpret various service layouts & develop lighting layouts, switching, fixture schedules, fixture cuts. To develop an understanding of services in interior design projects. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 1 | 2 | 1 | 2 | | 1 | | | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | | | |
| **CO3** | 1 | 3 | 3 | 3 | | 1 | | | |
| **CO4** | | 2 | 2 | 2 | 3 | 2 | 1 | | |

**Course Content**

Unit I
INTERIOR BUILDING SERVICES
Various interior building services in residential and private spaces. Integrating interior building services with interiors. Site visits and case studies.

Unit II
LIGHTING SYSTEM AND CEILING DESIGN
Lighting systems in interiors. Design process of modern lighting – Lighting for stores, offices, schools, hospitals and house lighting etc. Designing of Ceiling. Nature of light, flux and intensity. Lighting accessories- switches, sockets, fused connection units, lamp holders, ceiling roses etc.

Unit III
LIGHTING DESIGN AND DRAWINGS
Analysis of the basic services in 1-Floors 2-Walls 3-Ceilings, Analysis of the drawings of the basic interior services in an ongoing project. Lighting and color. Site visits. Lighting for various scenarios.

Unit IV
DESIGNING WITH SERVICES: PRIVATE SPACES
Preparation of design requirements catering to the interior building services, area requirements based on standards and their interrelation and circulation patterns, and mood boards. Creating a design project for an interior design project for private spaces.

**Text/ Reference Books:**


1. Kothari, D.P., Nagrath, I.J. (2019). Basic Electrical Engineering. McGraw-Hill.
2. Naomi House (2021). Fundamentals of Interior Architecture. Bloomsbury Visual Arts.
3. Pavarini III, C. (Author), Kaufman, M. (Author), Tarasuk, J.R. (2023). Lighting beyond Edison: Brilliant Residential Lighting Techniques in the Age of LEDs. Schiffer.
4. Hall, F., Greeno, R. (2017). Building Services Handbook (9th Edition). Routledge.
5. Jukanovic, A. (2018). Architectural Lighting Design: A Practical Guide. The Crowood Press Ltd.

**SIXTH SEMESTER**

| **Course Code: DIN 306** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Working Drawing for Interiors** | 0 | 4 | 4 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to demonstrate an understanding of working drawings, their correlation and cross-referencing in various technical projections. Student will define all the aspects that go into the making of interiors through a study of drawings related to construction. |
| **CO2** | The student will be able to interpret and show spatial concerns with technical aspects of the interiors. |
| **CO3** | The student will be able to correlate and illustrate practical skills in the ability to design and detail components within a building interior. Ability to assess the structural components of the buildings and to be able to make changes only if necessary and hence impact studies to be carried out. |
| **CO4** | The student will be able to express an understanding of the various parameters involved in the detailed drawing and will be able to produce the same. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | 3 | | | 2 | 3 | 2 | | |
| **CO2** | | 2 | 3 | | | 3 | 2 | | 3 |
| **CO3** | 2 | | 3 | 3 | | 2 | 3 | | 1 |
| **CO4** | | | | | 3 | | | 3 | |

**Course Content**

Unit I
WORKING DRAWINGS
Preparation of working drawings – Suitable scales of drawings, methods of giving dimensions and standards on plans, sections, elevations, details etc. Interior drawings, furniture layout floor plans with clearances, different level floor plans, and detailed floor plans of each room.

Unit II
ELEVATIONS AND SECTIONS
Elevations and Sections – Detailed sectional elevations of all the walls in the interior with all the required dimensions and specifications. Note: Students shall prepare at least two working drawing sets, one for a small residence and one for a commercial space.

Unit III
SERVICES DRAWING
Details of all services – layouts for flooring, ceiling, electrical, plumbing, lighting, fire fighting etc., toilet details, kitchen details, staircase details, furniture details, Interior finishing details, material, color and texture details, Fixture and fixing and joinery details.

Unit IV
SPECIFICATIONS WRITING
Specifications writing: Writing detailed clause by clause specifications for materials pre and post execution, tests, modes of measurements, manufacturer's details and specifications etc. Manufacturer's specifications – Database of manufacturers specifications for the materials based on surveys

**Text Books/ Reference Books:**


1. Leibing. W. Ralph, Architectural Working Drawings, 4th edition, John wiley and sons, New York, 2099.
2. Macey. W. Frank, Specification in detail, 5th edition, Technical press ltd, London, 2055.
3. Shah, M.G.; and others, Building Drawing: An integrated approach to build environment, 3rd ed, Tata McGraw Hill Pub. Co. Ltd, New Delhi, 2096.
4. Fredd Stitt, Working Drawing Manual, McGraw-Hill Professional; 1st edition, 2098.
5. Kilmer, Working Drawings and Details for Interiors, John Wiley and Son 2009

## SIXTH SEMESTER

| **Course Code: DIN 308** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Field Study** | 0 | 1 | 1 |

**Marking Scheme (NUES):**
Teachers Continuous Evaluation: 100 Marks

**Course Outcomes ]:**

| | |
|---|---|
| **CO1** | Student will be able to relate the knowledge of the academic exercises with on field experiences. |
| **CO2** | Student will be able to interpret and use observation-based knowledge and methods to build their skills |
| **CO3** | Student will be able to apply different skills and knowledge related to materials, culture & techniques**.** |
| **CO4** | Student will be able analyze and appraise their communication and presentation skills in delivering the projects. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | | | 2 | | 3 | 3 | 3 | 3 |
| **CO2** | 3 | 2 | 3 | | | 2 | 2 | | 3 |
| **CO3** | | | 3 | 3 | | | 3 | | |
| **CO4** | | | | | 3 | | 3 | 3 | |

**Course Content**

The students will undertake a creative-output based educational excursion / workshop/ documentation or collaborative projects in relation to their course of design. The output can be in the form of documentation, skill development, built form or exhibition etc.

**Text Books/ Reference Books:**


6. Neufert, E.(2019). Neufert Architects' Data. (Fifth Edition). Wiley-Blackwell.
7. T. Gray, G. (2022). An Introduction to the History of Architecture, Art & Design. Sunway University Press
8. Tillotsum, G.H.R. (2021). The tradition of Indian Architecture Continuity, Controversy – Change since 1850. Yale University Press.
9. Rangwala, S.C. (2022). Building Construction. Charotar Pub. House.
10. Shaoqiang, W.(2016). Exhibition Art - Graphics and Space Design. Promo press.

## SIXTH SEMESTER

| **Course Code: DIN 310** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Estimation and Costing** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to define and understand theories and equip the students to prepare the Estimate in order to foresee the cost of the work or to implement an interior design project. |
| **CO2** | The student will be able to interpret and also to monitor / control project costs. |
| **CO3** | The student will be able to demonstrate an understanding of preparing the Estimate & finding the cost of the overall project of works. |
| **CO4** | The student will be able to organize project Estimates and Bill of quantities. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 1 | 2 | 1 | 2 | | 1 | | | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | | | |
| **CO3** | 1 | 3 | 3 | 3 | | 1 | | | |
| **CO4** | | 2 | 2 | 2 | 3 | 2 | 1 | | |

**Course Content**

Unit I
INTERIOR PROJECT ESTIMATION
Estimation – definition, purpose, types of estimates, and procedure for Estimating the cost of work in order to implement an interior design project or to make products related to interior design like furniture, artifacts etc.

Unit II
RATE ANALYSIS AND ESTIMATION
Rate Analysis – definition, method of preparation, quantity & labor estimate for woodwork, steelwork, Aluminum work, glass & its rate for different thicknesses & sections, finishing for walls & ceilings. Electrical & plumbing products, wiring, ducting etc., and laying of tiles & wall paneling in the estimate of the project.

Unit III
DETAILED ESTIMATE
Detailed Estimate, contingencies, labor charges, bill of quantities, different methods of estimate for interior design works, methods of measurement of works. Costing of fixtures & fittings, wall paneling of ceramic tiles & other tiles, partitions.Creating Bill of quantities and project estimates.

Unit IV
PROJECT SPECIFICATION
Specification – Definition, purpose, procedure for writing specification for the purpose of calling tenders, types of specification. Specification for different items related to interior design projects.

**Text Books/ Reference Books:**

1. B.N. Dutta, Estimation and Costing (2018), Specification and Valuation in Civil engineering.
2. Diana Allison (2021), Estimating and Costing for Interior Designers.
3. S. C. Rangwala (2018), Elements of Estimating and costing, Charter publishing House, Anand, India.
4. Theo Susan (2018), The interior designers guide: to pricing, estimating budgeting.
5. Macey. W. Frank, Specification in detail, 5th edition, Technical press ltd, London, 2055.

## SIXTH SEMESTER

| **Course Code: DIN 312** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Design Entrepreneurship** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to develop and systematically apply entrepreneurial thinking that will allow them to identify and create business opportunities that may be commercialized successfully. |
| **CO2** | The student will be able to utilize the ability to discern distinct entrepreneurial traits and know the parameters to assess opportunities and constraints for new business ideas. |
| **CO3** | The student will be able to explain the systematic process to select and screen a business idea and to design strategies for successful implementation of business ideas. |
| **CO4** | The student will be able to create a business plan and access the forward and backward linkage of the proposed project through market research. Students will be able to build knowledge of and utilize various government (both union and state level)/ corporate schemes for establishing startups and running it successfully. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | | 3 | 3 | 2 | | 3 | | 2 | |
| **CO2** | 2 | 3 | 3 | 2 | | 1 | 1 | | |
| **CO3** | 1 | 3 | 3 | 2 | 2 | | 3 | | 1 |
| **CO4** | 3 | 3 | 3 | 3 | | 3 | | 3 | |

**Course Content**

Unit I
ECOSYSTEM OF STARTUPS & ENTREPRENEURS
Entrepreneurship & the present scenario, Startups and entrepreneurs (case studies), Entrepreneurial qualities.

Unit II
BUSINESS OPPORTUNITY IDENTIFICATION
Opportunities and Idea Generation, Design Thinking, Design-Driven Innovation, Systems thinking.

Unit III
INCUBATION
Understanding incubation of ideas, pre incubation and post incubation, Creating Business models.

Unit IV
ENTREPRENEURIAL SUPPORT SYSTEM & MANAGEMENT
Government incentives for entrepreneurship, acceleration, Funding new venture, Legal aspects of business (IPR, GST, Labor law), Marketing strategies, Negotiation skill, Factors driving success and failure of ventures.

**Text Books/ References:**


1. Hisrich, R.D., Peters, M.P., Shepherd, D.A., Sinha, S.(2020). Entrepreneurship (11th Edition). McGraw Hill.
2. Soota, A., Gopalan, S.R. (2021).Entrepreneurship Simplified: From Idea t: From Idea to IPO. Penguin Portfolio.
3. Krishnamurthy, B. (BKM), Mathi, K.M.( (2019). Becoming a Woman Entrepreneur. Notion Press.
4. Kaur, H. (2021). Women and Entrepreneurship in India: Governance, Sustainability and Policy (Women and Sustainable Business). Routledge.
5. Poornima, M. C. (2018). Entrepreneurship Development and Small Business Enterprises, 3/e. Pearson Education.

**SEVENTH SEMESTER**

| **Course Code: DIN 401** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Interior Design Project-V** | 0 | 10 | 10 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to Demonstrate and Illustrate research-based knowledge and methods including context analysis case studies of interior design trends, projects, project requirements and synthesis of information to provide context specific solutions. |
| **CO2** | The student will be able to interpret how design can impact, interact with, and improve environments while developing an understanding of space to human relations in the context of retail and market spaces. |
| **CO3** | The student will be able to formally apply methods of spatial planning & design, functionality and aesthetics to a small to medium scale project with constraints of site and context applying the knowledge of selected theme, materials, sustainability and climatic impact on design project. |
| **CO4** | The student will be able to Assimilate and Apply the learning of materials, construction and computers and create interior projects. To demonstrate Advanced skills of drawings and representation for developing an illustrative interior design portfolio. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | 3 | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | | 3 |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 1 | 3 | | 2 |
| **CO4** | | 1 | 2 | 1 | 3 | | 3 | | 2 |

**Course Content**

Unit I
RESEARCH & DOCUMENTATION
Understanding/Insight/Perception – Generating the insight for Context, Sustainability, Purpose, Motivation, End User etc. Action Research -Literature Study, Site Analysis, climatic setting, Case Study, site visit.

Unit II
BRIEF & DESIGN REQUIREMENTS
Preparation of design requirements and brief, area requirements based on standards and their interrelation and circulation patterns.

Unit III
CONCEPT DEVELOPMENT
Understanding and generating the idea, its expression in different methods using manual, digital media etc., Schematic Design development with spatial planning, Mock up models and visualizations with materials.

Unit IV
DESIGN DEVELOPMENT & PORTFOLIO DESIGN
Design development (on an appropriate scale)- double line representations of drawings, Expression of the design through 3D Model development on appropriate scale and materials, Design communication and Final portfolio submission (manual or digital output).

**Text Books/ Reference Books:**


1. Neufert, E.(2019). Neufert Architects' Data. (Fifth Edition). Wiley-Blackwell.
2. Dechiara, J, Julius Panero, J., Zelnik, M. (2017). Time-Saver Standards for Interior Design. McGraw-Hill Inc., US.
3. Ramstedt, F. (2020). The Interior Design Handbook: Furnish, Decorate, and Style Your Space. Clarkson Potter.
4. Tillotsum, G.H.R. (2021). The tradition of Indian Architecture Continuity, Controversy – Change since 1850. Yale University Press.
5. Rangwala, S.C. (2022). Building Construction. Charotar Pub. House.

## SEVENTH SEMESTER

| **Course Code: DIN 403** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Interdisciplinary Space Design** | 0 | 6 | 6 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to demonstrate and Illustrate research-based knowledge and methods including context analysis, case studies of interior design trends, projects, project requirements and synthesis of the information to provide context specific solutions. |
| **CO2** | The student will be able to interpret how design can impact, interact with, and improve environments while developing an understanding of space to human relation in context to interior landscape/ heritage/ renovation projects/ furniture design or other current vital allied fields of interiors. |
| **CO3** | The student will be able to formally apply methods of spatial planning & design, functionality and aesthetics to a small-scale project (to interior landscape/ renovation projects/ furniture design or other vital allied fields of interiors.) with constraints of site and context, applying their knowledge of selected themes, materials, and sustainability. |
| **CO4** | The student will be able to Assimilate and Apply the learning of materials, construction and computers and create interior projects. To demonstrate Advanced skills of drawing and representation for developing an illustrative interior design portfolio. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | 3 | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | | 3 |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 1 | 3 | | 2 |
| **CO4** | | 1 | 2 | 1 | 3 | | 3 | | 2 |

**Course Content**

Unit I
RESEARCH & DOCUMENTATION
Understanding/Insight/Perception – Generating the insight for Context, Sustainability, Purpose, Motivation, End User etc. Action Research -Literature Study, context, User requirements, Case Study, site visit.

Unit II
BRIEF & DESIGN REQUIREMENTS
Preparation of design requirements and brief , area requirements based on standards and their interrelation and circulation patterns.

Unit III
CONCEPT DEVELOPMENT
Understanding and generating the idea, its expression in different methods using manual, digital media etc., Schematic Design development with spatial planning, Mock up models and visualizations with materials.

Unit IV
DESIGN DEVELOPMENT & PORTFOLIO DESIGN
Design development (on appropriate scale)- double line representations of drawings, Expression of the design through 3d Model development on appropriate scale and materials, Design communication & Final portfolio submission (manual or digital output).

**Text Books/ Reference Books:**


1. Neufert, E.(2019). Neufert Architects' Data. (Fifth Edition). Wiley-Blackwell.
2. Dechiara, J., Julius Panero, J., Zelnik, M. (2017). Time-Saver Standards for Interior Design. McGraw-Hill Inc., US.
3. Ramstedt, F. (2020). The Interior Design Handbook: Furnish, Decorate, and Style Your Space. Clarkson Potter.
4. Ching, F.D.K. (2020). Building Construction Illustrated (6th Edition). Wiley

5. Grimley, C., Love, M. (2018). The Interior Design Reference & Specification Book updated & revised: Everything Interior Designers Need to Know Every Day. Rockport Publishers.

## SEVENTH SEMESTER

| **Course Code: DIN 405** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Dissertation** | 0 | 6 | 6 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to define and recognize the importance of planning and preparation of data required to undertake a research project. |
| **CO2** | The student will be able to develop a thorough understanding of the chosen subject area. Identify the critical data and material required to carry out the project. |
| **CO3** | The student will be able to demonstrate the ability to examine, collate and critically assess/interpret data. |
| **CO4** | The student will be able to formulate the study and the inputs based on research findings. Compare the findings, assess the research as per the comments and discussions and finally submit a complete research report or design. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | | 3 | | | | | | | |
| **CO2** | | 3 | | | | | 2 | | |
| **CO3** | | 3 | 1 | | 2 | | | | |
| **CO4** | | 3 | 2 | | 3 | | | | |

**Course Content**

Unit I
SYNOPSIS
Identification of the project, and preparation of Synopsis. Introduction/Background, Aims & Objective, Rationale of the topic, Problem Identification and justification. Demonstrate why the topic and research is relevant to your field of study.

Unit II
RESEARCH METHODOLOGY & DATA COLLECTION
Exploring various research methods, Creating Research Methodology, Identify and group together common areas. Compare, contrast and evaluate issues. Identifying various modes of data collection. Finalizing case studies. Literature study parameters, Field Study, Case study, On field observation and study User research, Quality and Quantitative data generation.

Unit III
REPORT PREPARATION
Inferences, Conclusion and Report
Defining parameters, Comparing the research on the basis of parameters, Writing inferences, summarizing for the report.

Unit IV
THESIS TOPIC SELECTION
Identification of the project, and preparation of Synopsis. Introduction/Background, Aims & Objective, Rationale of the topic, Problem Identification and justification. Demonstrate why the topic and research is relevant to your field of study.

**Text Books/ Reference Books:**

1. Laurel, Brenda. Design research: Methods and perspectives. MIT press, 2003.
2. Kothari, C. R. Research methodology: Methods and techniques. New Age International, 2004.
3. Gupta, S. P., and M. P. Gupta. Business statistics. Sultan Chand & Sons, 2010.
4. Sanoff, Henry. Visual research methods in design. John Wiley & Sons Incorporated, 1991.
5. Snyder, James C., ed. Architectural research. Vol. 6. Van Nostrand Reinhold Company, 1984.

## SEVENTH SEMESTER

| **Course Code: DIN 407** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Internship** | 0 | 2 | 2 |

**Marking Scheme (NUES):**
Teachers Continuous Evaluation: 100 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | Student will be able to relate the knowledge of the academic exercises with practical projects. |
| **CO2** | Student will be able to interpret and use observation-based knowledge and methods to implement conceptualization in the execution of projects. |
| **CO3** | Student will be able to apply different processes and methodologies related to materials, details, and working drawings. |
| **CO4** | Student will be able analyze and appraise their communication and presentation skills in delivering the projects. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | | | 2 | | 3 | 3 | 3 | 3 |
| **CO2** | 3 | 2 | 3 | | | 2 | 2 | | 3 |
| **CO3** | | | 3 | 3 | | | 3 | | |
| **CO4** | | | | | 3 | | 3 | 3 | |

**Course Content**

Unit I
PREPARATION OF PROJECT
The student can opt for on site training, workshop, industry internship or working with social enterprise. Working on the project, creating drawings and details, Conceptual and presentation drawings.

Unit II
BUSINESS COMMUNICATION
Discussions with clients, Follow-ups with Consultants, Networking with Vendors.

Unit III
SITE COORDINATION
Site inspection and supervision, Site management, On site discussion with clients, contractors and vendors.

Unit IV
PORTFOLIO DEVELOPMENT
Documentation of projects worked on, Preparation of physical or 3D models, Analyzing and appraising the projects with the help of different attributes.

**Text Books/ Reference Books:**


1. Neufert, E.(2019). Neufert Architects' Data. (Fifth Edition). Wiley-Blackwell.
2. Ramstedt, F. (2020). The Interior Design Handbook: Furnish, Decorate, and Style Your Space. Clarkson Potter.
3. Chudley, R., Greeno, R., Kovac, K. (2020). Chudley and Greeno's Building Construction Handbook. Routledge.
4. Christine M. Piotrowski (2003), Becoming an Interior Designer, John Wiley and Sons.
5. Kennedy, J. (2021). Launch Into Interior Design: a beginner's guide to the industry. Kennedy Literary Agency

## SEVENTH SEMESTER

| **Course Code: DIN 409** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Site & Project Management** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to define the procedures of project planning and management. |
| **CO2** | The student will be able to understand project characteristics and plan various stages of a project. |
| **CO3** | The student will be able to demonstrate the learning and assess techniques for Project planning, scheduling, and Execution Control. |
| **CO4** | The student will be able to assess site investigations and inspections. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 1 | | | | | 2 | | | |
| **CO2** | 2 | 2 | | | | | | | |
| **CO3** | | | | 3 | | 2 | 2 | | |
| **CO4** | 2 | | | | 2 | | | | |

**Course Content**

Unit I
INTERIOR PROJECT PLANNING & MANAGEMENT
Introduction to project management, construction industry, stakeholders, roles, responsibilities and functional relationships. Project planning and project scheduling and project controlling, Role of Decision in project management.

Unit II
ELEMENTS OF NETWORK
Inputs for project planning, defining activities and their interdependence, time and resource estimation. Work breakdown structures. Linear Scheduling methods – bar charts, LOB, their limitations.. Principles, definitions of network based scheduling methods: CPM, PERT. Network representation, Network analysis – forward and backward passes.

Unit III
PROJECT COSTS AND ESTIMATES
Project cost, Indirect project cost, direct project cost, total project cost and optimum duration, contracting the network for cost optimization, steps in cost-time optimization, Methods of material/resource estimation and management, Resources scheduling and leveling. Labour welfare, applicable labor Legislations. Construction equipment types, characteristics & applications.

Unit IV
SITE MANAGEMENT
Site layout and organization, Site investigations. Quality tests for construction material and processes. Quality control inspections. Project progress tracking. Crashing Project Schedules, its impact on time, cost and quality. Project direct and indirect costs. Safety in Construction Projects. Softwares relevant to the industry

**Text Books/ Reference Books:**


1. Punmia, B.C. , Khandelwal, K.K. (I.A.S.). (2022). Project Planning and Control with PERT and CPM. Laxmi Publications Private Limited.
2. Kennedy, J. (2021). Launch Into Interior Design: a beginner's guide to the industry. Kennedy Literary Agency
3. Harris, F. (2018). Modern Construction Management (7th Edition). Wiley India.
4. Gahlot, P.S., Dhir, B.M. (2018). Construction Planning and Management. New Age International (P) Ltd.
5. Christine M. Piotrowski (2003), Becoming an Interior Designer, John Wiley and Sons.

## SEVENTH SEMESTER (PROGRAM CORE ELECTIVE)

| **Course Code: DIN 411** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Branding in Interiors** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to define and relate to the fundamental principles and concepts of Branding in Interiors. |
| **CO2** | The student will be able to demonstrate and develop basic technical skills required to be a commercial Interior Designer. |
| **CO3** | The student will be able to identify current trends in design of branded spaces. |
| **CO4** | The student will be able to apply the acquired skills and knowledge as an Interior Design professional and analyze the relevance and career possibilities of the commercial Interior Designer. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | 2 | | | | 1 | 1 | | |
| **CO2** | 2 | 2 | 2 | | | 1 | 3 | | 1 |
| **CO3** | 2 | 3 | | 1 | | 2 | 3 | 1 | 2 |
| **CO4** | 2 | 2 | 1 | 1 | | 2 | 3 | | 2 |

**Course Content**

Unit I
COMMERCIAL INTERIORS
Understanding commercial interiors and types. Role of interior designers in branding. Brand identity in interiors. Exploring various brands and their design identity.

Unit II
RETAIL INTERIORS
Planning and layouting a retail store, commercial circulation, display and function. understanding retail interior trends with case studies/ site visits

Unit III
RESTAURANT INTERIORS
Planning and layouting a restaurant , circulation, display and function. understanding restaurant interior trends with case studies/ site visits

Unit IV
COMMERCIAL INTERIOR MATERIALS
Exploring commercial materials, advantages and disadvantages. commercial hardwares.

**Text Books/ Reference Books:**


1. Branding Interior Design: Visibility and Business Strategy for Interior Designers: Visibility and Business Strategy for Interior Designers, Kim Kuhteubl, Schiffer Publishing Ltd, USA, 2017.
2. Designing Commercial Interiors, Christine M. Piotrowski, Wiley, London, 2016.
3. Dining Out: The New Restaurant Interior Design, Wang Shaoqiang , Hoaki, UK, 2023.
4. Architecture of Display: Department Stores and Modern Retail (Routledge Research in Interior Design), Anca I. Lasc, Patricia Lara-Betancourt, Margaret Maile Petty, Routledge, UK, 2020.
5. Interior Design Materials And Specifications: Bundle Book + Studio Access Card, Lisa Godsey, Fairchild Books, Chicago, 2021.

## SEVENTH SEMESTER (PROGRAM CORE ELECTIVE)

| **Course Code: DIN 413** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Interior Landscape** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to develop an understanding about the design of interior landscape with special emphasis on the choice and care of plant materials used in the interior spaces . |
| **CO2** | The student will be able to interpret the various landscaping elements and their application in interior spaces |
| **CO3** | The student will be able to formally apply skills in proper planting techniques and plant maintenance. |
| **CO4** | The student will be able to assimilate and demonstrate the principles of design as applied to interior gardens. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | 3 | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | | 3 |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 1 | 3 | | 2 |
| **CO4** | | 1 | 2 | 1 | 3 | | 3 | | 2 |

**Course Content**

Unit I
INTRODUCTION TO LANDSCAPE
Importance of Landscape Design, Artificial Landscaping, Natural Landscaping, Hard Landscaping, Soft Landscaping, Understanding the characteristics and applications of each type of landscaping.

Unit II
ELEMENTS AND PRINCIPLES OF LANDSCAPE DESIGN
Explore the fundamental elements and principles of landscape design, understand how these elements contribute to creating cohesive and visually appealing landscapes. Garden furniture, terrace gardens.

Unit III
INTERIOR LANDSCAPING AND LANDSCAPE DESIGN PROCESS
Factors for Interior Landscaping, Important Factors in the Design Process, planning, dimensions and design of foreground, private and service spaces.

Unit IV
LANDSCAPE THEMES, SUSTAINABLE DESIGN, AND PLANT STUDY
Themes and Styles in Landscape Design, Sustainable Landscape Design, Introduction to the Study of Plants in Relation to Landscape Design, Types of Plants for Landscaping: Ornamental, Screens, Shade, Borders, Ground Cover, Design with Plants and Basic Principles selection, planting & care (trees, plants, hedges, flowers, lawns, vines, creepers, Indoor plants, bonsai).

**Text Books/ Reference Books:**


1. Trivedi, P & Chowdhury B, Home Gardening, New Delhi, India, Council of Agricultural Research
2. "Principles of Landscape Architecture" by Charles A. Birnbaum and Carl Steinitz
3. Landscape Architecture: An Introduction" by Robert Holden and Jamie Liversedge
4. Sustainable Landscape Construction: A Guide to Green Building Outdoors" by J. William Thompson and Kim Sorvig
5. Flower Arranging – A complete guide for beginners, Judith. B. The Flower Press Ltd., 2012

## SEVENTH SEMESTER (PROGRAM CORE ELECTIVE)

| **Course Code: DIN 415** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Interior Renovation & Adaptive Reuse** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to define and relate to the fundamental principles and concepts of renovation and adaptive reuse. |
| **CO2** | The student will be able to demonstrate and develop knowledge of renovation and restoration in interiors. |
| **CO3** | The student will be able to identify various rules and laws of renovation and restoration. |
| **CO4** | The student will be able to apply and assess the acquired knowledge as an Interior Design professional. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | 2 | | | | 1 | 1 | | |
| **CO2** | 2 | 2 | 2 | | | 1 | 3 | | 1 |
| **CO3** | 2 | 3 | | 1 | | 2 | 3 | 1 | 2 |
| **CO4** | 2 | 2 | 1 | 1 | | 2 | 3 | | 2 |

**Course Content**

Unit I
RENOVATION
Importance of renovation, Need for renovation, Areas of concern: walls, floor, ceiling/roof, wood work, electrical, plumbing, sanitary, furniture & furnishing. Evaluation of existing conditions, measuring space, structural stability.

Unit II
REPAIR PROPOSALS
Case Studies of renovation projects, Preparing repair proposal, the blending of repair work with old work giving consideration to purpose, stability and aesthetics for residential and official spaces.

Unit III
ADAPTIVE REUSE IN SPACES
Adaptive reuse of interior spaces: historical/ cultural/ recreational. Importance of restoration. Study of prevalent rules and regulations of local authorities

Unit IV
ADAPTIVE REUSE IN INTERIOR ELEMENTS
Adaptive reuse in interior materials, furniture etc. Sustainability - Up-cycling and recycling, design trends.

**Text Books/ Reference Books:**


1. When a Factory Becomes a Home: Adaptive Reuse for Living, Chris van, Braun, United Kingdom, 2018.
2. Sustainable Design for Interior Environments, second Edition, Susan M.Winchip, 2007.
3. Adaptive Reuse: Extending the Lives of Buildings, Liliane Wong, Birkhauser, 2016.
4. Home Interior Design & Renovation: A step by step practical guide from Design to Execution of 'DIY' Projects, Amit Murao, 2019.
5. Homebody: A Guide to Creating Spaces You Never Want to Leave, Joanna Gaines, Harper, Illustrated edition, 2018.

## EIGHTH SEMESTER

| **Course Code: DIN 402** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Design Thesis** | 0 | 20 | 20 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | Student will be able to define a context, user requirements and briefs. Student should infer the research and create a methodology for the application of the knowledge to the design project. |
| **CO2** | Student will be able to develop their knowledge of professional principles. |
| **CO3** | Student will be able to discover design-integrated solutions for the project considering the environment and sustainability impact of the design. |
| **CO4** | Student will be able to conclude the project both visually and verbally considering all the ethical principles of Interior design. Student should be able to build independent learning by applying modern appropriate tools. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | 3 | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 3 | 3 | | |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 2 | 3 | | 3 |
| **CO4** | | 1 | 2 | 1 | 3 | 2 | 2 | | 3 |

**Course Content**

Unit I
SYNOPSIS AND RESEARCH DOCUMENTATION
Introduction/Background, Aims & Objective, Rationale of the topic, Site Identification and justification, Identify and group together common areas, Case studies and literature studies, Compare, contrast and evaluate issues, Demonstrate the relevance of the topic and research in the field of study.

Unit II
PROGRAM FORMULATION
Detailed Design Program, Design Criteria / Approach specific to the topic chosen, Mood Board and Themes, Conceptual Design.

Unit III
DESIGN INTERVENTIONS
Preliminary Design Drawings, Service Drawings, Site Details.

Unit IV
DESIGN PROPOSAL AND REPORT
Detailed design proposal, all Drawings, Report and Project video/ 3D/ Model.

**Text Books/ Reference Books:**


1. Neufert, E.(2019). Neufert Architects' Data. (Fifth Edition). Wiley-Blackwell.
2. Dechiara, J., Julius Panero, J., Zelnik, M. (2017). Time-Saver Standards for Interior Design. McGraw-Hill Inc., US.
3. Ramstedt, F. (2020). The Interior Design Handbook: Furnish, Decorate, and Style Your Space. Clarkson Potter.
4. Grimley, C., Love, M. (2018). The Interior Design Reference & Specification Book updated & revised: Everything Interior Designers Need to Know Every Day. Rockport Publishers.
5. Ching, F.D.K. (2020). Building Construction Illustrated (6th Edition). Wiley

## EIGHTH SEMESTER

| **Course Code: DIN 404** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Design Degree Show** | 0 | 4 | 4 |

**Marking Scheme (NUES):**
Teachers Continuous Evaluation: 100 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | Student will be able to apply their knowledge of design and publishing in creating and documenting the exhibition of their work. |
| **CO2** | Student will be able to assess and select their best works for exhibition. |
| **CO3** | Student will be able to plan and execute a professional design exhibition. |
| **CO4** | Student will be able to communicate their best interior design projects to industry professionals. Student will be able to create a network of professionals for their career growth. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | | 3 | 2 | 2 | 3 | 2 | | | |
| **CO2** | 2 | 3 | | 1 | 2 | 2 | | | |
| **CO3** | | 3 | 2 | 2 | 3 | | 3 | | 2 |
| **CO4** | | 3 | 3 | 3 | 3 | | | | 3 |

**Course Content**

The students organize a Design Degree Show and present their work to the public. They are required to plan & design various product elements/literature and resources needed for their own Exhibition of work.

**Text Books/ Reference Books:**


1. Dechiara, J., Julius Panero, J., Zelnik, M. (2017). Time-Saver Standards for Interior Design. McGraw-Hill Inc., US.
2. Daab, R. (2021). High On… Exhibition Design. Loft Publications.
3. Piehl, J.(2021). Graphic Design in Museum Exhibitions: Display, Identity and Narrative. Routledge.
4. Jehl, E.(2018). Grand Stand 6: Designing Stands for Trade Fairs and Events. Frame Publishers.
5. Shaoqiang, W.(2016). Exhibition Art - Graphics and Space Design. Promo press.

## EIGHTH SEMESTER

| **Course Code: DIN 406** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Professional Practice** | 2 | 0 | 2 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Theory Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to define the procedures and regulations for opening an Interior design office. |
| **CO2** | The student will be able to comprehend the professional ethics of the interior design profession. |
| **CO3** | The student will be able to identify various professional bodies of interior design profession and stakeholders in a project. |
| **CO4** | The student will be able to illustrate an understanding of tenders and contracts. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 1 | | | | | 2 | | | |
| **CO2** | 2 | 2 | | | | | | | |
| **CO3** | | | | 3 | | 2 | 2 | | |
| **CO4** | 2 | | | | 2 | | | | |

**Course Content**

Unit I
INTERIOR OFFICE MANAGEMENT
Interior office planning and management, company registration, and resources required.

Unit II
PROFESSIONAL ETHICS & GENDER EQUALITY
Roles and duties of an interior designer, Scale of professional fees, mode of payment, professional conduct and ethics. Gender specific interior design: world over and incentives in India, Gender pay gap. Challenges of the profession. Preparing for industry.

Unit III
PROFESSIONAL BODIES
Design laws and regulations in India. Role of an interior designer with client, Contractor and Project management services & local authorities. Interior Designer's role in society and careers in the Design Profession.

Unit IV
TENDERS, CONTRACTS & COMPETITIONS
Bidding a tender, types of tender and contracts, interior competitions, pitching for a project, list of deliverables.

**Text Books/ Reference Books:**


1. National Building Code 2016 and 2005
2. Kennedy, J. (2021). Launch Into Interior Design: a beginner's guide to the industry. Kennedy Literary Agency
3. Bids, Tenders & Proposals by Harold Lewis
4. Contracts and their Management by B.S. Ramaswamy
5. Christine M. Piotrowski (2003), Becoming an Interior Designer, John Wiley and Sons.

# OPEN ELECTIVES

- **DID 308 :**Digital Fabrication
- **DID 310 :** Light and Fixture Design
- **DID 312 :** Design of Intelligent Devices
- **DIN 314:** Merchandising and Display design
- **DIN 316:** Design for Sustainability
- **DIN 318:** Furniture Design
- **DIX 306:** Creative Coding
- **DIX 308:** Visual Communication
- **DIX 310:** Environmental Graphic Design

## OPEN ELECTIVES

| **Paper code: DID 308** | | | | L/T | | S/P | | C |
|---|---|---|---|---|---|---|---|---|
| **Subject: Digital Fabrication** | | | | 0 | | 3 | | 3 |
| **Marking Scheme:**<br>Teachers Continuous Evaluation: 40<br>End Term Practical Examination: 60 | | | | | | | | |
| **Course Outcomes :** | | | | | | | | |
| **CO1** | Ability of the students to understand the technologies used in products | | | | | | | |
| **CO2** | Ability of the students to create real-time design modifications | | | | | | | |
| **CO3** | Ability of the students to make product models using new manufacturing technologies like 3D printing and Laser cutting. | | | | | | | |
| **CO4** | Ability of the students to develop prototypes involving complex geometry | | | | | | | |
| **CO/PO** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PSO1** | **PSO2** | **PSO3** |
| **CO1** | 2 | **2** | 3 | 3 | 2 | 3 | 2 | 2 |
| **CO2** | 3 | 2 | 2 | 3 | 3 | 3 | 1 | 2 |
| **CO3** | 1 | 2 | 3 | 3 | 2 | 3 | 1 | 2 |
| **CO4** | 2 | 2 | 1 | 3 | 1 | 3 | 2 | 2 |
| **COURSE CONTENT** | | | | | | | | |
| Unit-I<br>LASER CUT MACHINE<br>Introduction to Laser cutting, developing 2D drawings of product parts in software, converting drawings for compatibility with laser cutters | | | | | | | | |
| Unit-II<br>3D PRINTING<br>Making 3D models with complex geometry, exporting them to printer-compatible formats, 3D printing of modeled CAD components, assembly of printed objects | | | | | | | | |
| Unit-III<br>CNC ENGRAVER<br>Introduction to CNC machining. Making 3D models with complex geometry, exporting them to printer-compatible formats, modifying the models for CNC machining, machining the parts in different materials | | | | | | | | |
| Unit-IV<br>PRODUCT DEVELOPMENT<br>Mini-project involving a complex geometry, Assembly of different parts, Design of product with parts specifically developed using all the machines | | | | | | | | |

**Text Books/ Reference Books:**


1. Banzi M (2021) *Getting started with Arduino*, Shroff/Maker Media
2. Phaidon E (2019) *Mass Production*, Phaidon Design Classics,
3. Overby A. (2020) *CNC Machining Handbook: Building, Programming, and Implementation*, McGraw-Hill Education TAB
4. Jeff Geary, Dave Renshaw, (2021) *3D Printing & Laser Cutting: A Railway Modelling Companion*, Crecy Publishing

## OPEN ELECTIVES

| **Paper code: DID-310** | | | | L/T | S/P | | C |
|---|---|---|---|---|---|---|---|
| **Subject: Light And Fixture Design** | | | | 0 | 3 | | 3 |
| **Marking Scheme:**<br>Teachers Continuous Evaluation: 40 Marks<br>End Term Theory Examination: 60 Marks | | | | | | | |
| **Course Outcomes [Bloom's Knowledge Level]:** | | | | | | | |
| **CO1** | Student will be able to explore and classify the different types of Electrical and Lighting Services in Interior Building Systems.**[** | | | | | | |
| **CO2** | Students will be able to classify the primary types of lamps and fixtures used in interior applications and use their applications and pros/cons. | | | | | | |
| **CO3** | Student will be able to analyze theories of physical and physiological factors of light and its relationship to human behavior and the interior environment. | | | | | | |
| **CO4** | Student will be able to interpret various Lighting devices and their effect on users & Develop lighting layouts, switching, fixture schedules, and fixture cuts. | | | | | | |
| **CO/PO** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PSO1** | **PSO2** | **PSO3** |
| **CO1** | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 |
| **CO2** | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 3 |
| **CO3** | 3 | 1 | 3 | 2 | 3 | 3 | 3 | 3 |
| **CO4** | 2 | 3 | 3 | 1 | 3 | 3 | 2 | 2 |
| **COURSE CONTENT** | | | | | | | | |
| Unit I<br>LIGHTING DEVICES<br>Electrical supply in a building, Types of Lighting devices, illumination, components of Lighting Fixture, Working principles of Lighting appliances, Forms of Lighting appliances, Material analysis of Lighting Devices | | | | | | | | |
| Unit II<br>LIGHTS AND LIGHTING FIXTURES<br>Basics of illumination, Glare, Factors affecting visual tasks, Classification of lighting – Artificial light sources, Colour temperature, Choice of luminaries. Types of lights and Lighting fixtures. | | | | | | | | |
| Unit III<br>LIGHTING SYSTEM AND CEILING DESIGN<br>Lighting systems in interiors. Design process of modern lighting – Lighting for stores, offices, schools, hospitals, house lighting, etc. Designing of Ceiling. | | | | | | | | |
| Unit IV<br>LIGHTING DESIGN AND DRAWINGS<br>Analysis of the basic lighting issues and user requirements, semantics, materials, and Site visits. Design of lighting Lighting for various scenarios. | | | | | | | | |
| **Text/ Reference Books:**<br>1. Kothari, D.P., Nagrath, I.J. (2019). Basic Electrical Engineering. McGraw-Hill.<br>2. Naomi House (2021). Fundamentals of Interior Architecture. Bloomsbury Visual Arts.<br>3. Pavarini III, Kaufman M. Tarasuk, J.R. (2023). Lighting beyond Edison: Brilliant Residential Lighting Techniques in the Age of LEDs. Schiffer.<br>4. Ching, F.D.K. (2020). Building Construction Illustrated (6th Edition). Wiley<br>5. Hall, F., Greeno, R. (2019). Building Services Handbook (9th Edition). Routledge | | | | | | | | |

## OPEN ELECTIVES

| **Paper code: DID 312** | | | | L/T | S/P | | C |
|---|---|---|---|---|---|---|---|
| **Subject: Design Of Intelligent Devices** | | | | 0 | 3 | | 3 |
| **Marking Scheme:**<br>Teachers Continuous Evaluation: 40<br>End Term Practical Examination: 60 | | | | | | | |
| **Course Outcomes :** | | | | | | | |
| **CO1** | Use scientific and professional design methods in the implementation of independent work in the field. | | | | | | |
| **CO2** | Utilize appropriate research methodology to collect data. | | | | | | |
| **CO3** | Critically analyse the collected data and draw conclusions accordingly. | | | | | | |
| **CO4** | Present research findings and conclusions in the form of a research paper. | | | | | | |
| **CO/PO** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PSO1** | **PSO2** | **PSO3** |
| **CO1** | 2 | 3 | 1 | 2 | 2 | 3 | 2 | 2 |
| **CO2** | 2 | 3 | 1 | 2 | 2 | 3 | 2 | 2 |
| **CO3** | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 1 |
| **CO4** | 2 | 2 | 2 | 3 | 2 | 3 | 2 | 2 |

**COURSE CONTENT**

Unit-I

INTELLIGENT DEVICES

Introduction to Intelligent devices and its importance, understanding current affairs and finding need of the future, study of various intelligent devices and systems, Identification of problem, User analysis strategies and market study.

Unit-II

CONCEPT DEVELOPMENT

Brainstorming, Introduction to IOT, Introduction to types of sensors, Types of Motros, IOT systems, Concept development, Concept Testing and selection, Selection of the components, Detailed drawing of the parts, assembly, selection of materials and IOT systems

Unit-III

PROTOTYPING

CAD model generation, Analysis of Product using simulations, Verifying working of prototype/codes, manufacturing of the parts and buying the required parts, Prototyping and assembly of the finished product

Unit-IV

TESTING

Testing of the prototype, getting feedback after testing, refining the product, market fit analysis, Data analysis of Product working, application of various testing methods to verify the product performance

**Text/Reference Books :**


1. Samuel Greengard, (2015) *The Internet of Things,* The MIT Press
2. Klaus Schwab, (2017) The Fourth Industrial Revolution, Portfolio Penguin
3. Fotios Chantzis (Author), Ioannis Stais (Author), Paulino Calderon (Author) (2021) *Practical IoT Hacking: The Definitive Guide to Attacking the Internet of Things*, No Starch Press
4. R. J. Hemalatha, D. Akila, et al. (2022)*The Internet of Medical Things (IoMT): Healthcare Transformation (Advances in Learning Analytics for Intelligent Cloud-IoT Systems)*, Wiley-Scrivener
5. Shalli Rani (2022) *IoT-enabled Smart Healthcare Systems, Services and Applications*, Wiley

## OPEN ELECTIVES

| **Course Code: DIN 314** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Merchandising and Display Design** | 0 | 3 | 3 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to define and relate to the fundamental principles and concepts of Merchandising and display. |
| **CO2** | The student will be able to analyze the various factors that influence sales and will be able to identify the current trends in the interdisciplinary field. |
| **CO3** | The student will be able to demonstrate and assess the fundamental principles and concepts of designing an exhibit. |
| **CO4** | The student will be able to Evaluate various advertising techniques to make appropriate selection and create attractive visual displays to attract customers/users. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | 3 | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | | 3 |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 1 | 3 | | 2 |
| **CO4** | | 1 | 2 | 1 | 3 | | 3 | | 2 |

**Course Content**

Unit I
VISUAL MERCHANDISING AND DISPLAY
Concept of commercial art and merchandising, Understanding Brand identity, merchandising principles and commercial display. The user interaction and user experience for display design and current trends. Elements of display. Case Study/ Education Visit.

Unit II
MERCHANDISING & DISPLAY DESIGN PROJECT
Preparation of design requirements and brief, area requirements based on standards and their interrelation and circulation patterns, designing a display and make a model/mock-up for presentation with photographs/videos

Unit III
EXHIBIT DESIGN
Elements of an Exhib, Designing exhibit: Basic approaches, Lighting, environmental control and security. Exhibition Design interpretation and Case study/ Educational Visit. Creating, mounting and installation.

Unit IV
EXHIBIT DESIGN PROJECT
Design an complete exhibit from identifying and selecting a topic, creating its design brief, construct its theme and presentation, make a model/mock-up for presentation with photographs/videos

**Text Books/ Reference Books:**


1. Neufert, E.(2019). Neufert Architects' Data. (Fifth Edition). Wiley-Blackwell.
2. Creating exhibitions : collaboration in the planning, development, and design of innovative experiences / Polly McKenna-Cress, Janet A. Kamien.Hoboken, New Jersey : Wiley, [2013]
3. Exhibitions: Concept, Planning and Design by Tom Klobe Publisher: American Alliance Of Museums (April 20, 2012) ISBN-10: 193325369X ISBN-13: 978-1933253695
4. Light and Emotions: Exploring Lighting Cultures / Conversations with Lighting Designers / edited by Vincent Laganier & Jasmine van der Pol Published by Birkhauser, GmbH, Basel, 2011.
5. Histories of Exhibition Design in the Museum (Museum Making) 1st Edition, Kate Guy, Hajra Williams, Claire Wintle, Routledge, 2023.

## OPEN ELECTIVES

| **Course Code: DIN 316** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Design for Sustainability** | 0 | 3 | 3 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The student will be able to define and relate to the fundamental principles and concepts of sustainability. |
| **CO2** | The student will be able to demonstrate and develop knowledge of elements of sustainability. |
| **CO3** | The student will be able to identify various crafts. |
| **CO4** | The student will be able to apply the acquired knowledge as an Interior Design professional and analyze the application of craft in interiors. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | 3 | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | | 3 |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 1 | 3 | | 2 |
| **CO4** | | 1 | 2 | 1 | 3 | | 3 | | 2 |

**Course Content**

Unit I
SUSTAINABILITY & VERNACULAR DESIGN
Importance of Sustainability. Principles of sustainable design. Evaluation of sustainable materials and process of application. Elements of style, materials and concepts of vernacular designs across North and South India and the world. Vernacular materials. Case studies/ Site visits.

Unit II
ELEMENTS OF SUSTAINABILITY
Exploring various elements of sustainability: form, material, techniques etc. Exploring the elements through design and application in class projects.

Unit III
CRAFT AND SUSTAINABILITY
Elements of style, materials and concepts of various arts and crafts across North and South India and the world. Assessing its sustainability and application. Case studies/ Site visits. Class projects to employ these to assist in analyzing their application and possibilities in current Design practice.

Unit IV
SUSTAINABLE FUTURE
Assessing modern techniques and forms to create sustainable designs. Conceptualizing and creating futuristic design interventions which are sustainable.

**Text Books/ Reference Books:**

1. Sustainability in Interior Design by Sian Moxon , Lawrence King Publishing , 2012
2. Sustainable Design for Interior Environments, second Edition, Susan M.Winchip, 2007
3. The sustainable design book by Rebecca proctor, Lawrence King Publishing 2015
4. Carol Stangler, The crafts and art of Bamboo, Rev. updated edition, Lark books, 2009.
5. Crafts in Interior Architecture; India. 1990 Onwards, Rishav jain, 2015

**OPEN ELECTIVES**

| **Course Code: DIN 318** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Furniture Design** | 0 | 3 | 3 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The Student will be able to list and classify furniture with their correlation in any specific place of use. |
| **CO2** | The Student will be able to demonstrate intrinsic knowledge of the various kinds of furniture in any set of space and develop the understanding of the appropriateness of the type of material required. |
| **CO3** | The student will be able to apply design processes for furniture conceptualization and analyze furniture respecting the physical properties of the respective materials considered. |
| **CO4** | The Student will be able to vividly assess the visual and physical communication of furniture with the user and design furniture using various traditional and modern technologies. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** | **PSO04** |
|---|---|---|---|---|---|---|---|---|---|
| **CO1** | 3 | 2 | 1 | 2 | | 3 | | 3 | |
| **CO2** | 1 | 3 | 3 | 3 | 1 | 1 | 2 | | 3 |
| **CO3** | 1 | 3 | 3 | 3 | 2 | 1 | 3 | | 2 |
| **CO4** | | 1 | 2 | 1 | 3 | | 3 | | 2 |

**Course Content**

Unit I
FURNITURE DESIGN
Principal of Furniture design, Form ,Spatial Organization & types of furniture, Study of various furniture Residential, Outdoor, Commercial sites.Furniture design styles. Human factors, engineering and ergonomic considerations: Principles of Universal Design and their application in furniture design

Unit II
MATERIALS & FORM FABRICATION
furniture design materials, Modern techniques of form generation and prototyping, Conceptualization, Form Generation and Theme board.

Unit III
FURNITURE JOINTS
Assembly, Furniture Joinery and Hardware. Final designed Prototype.

Unit IV
INNOVATIVE FURNITURE PROTOTYPING
Modern innovative techniques of form generation and prototyping, Sustainable furniture, Conceptualization, Form Generation and Theme board, Final designed Prototype and post Design Analysis

**Text Books/ Reference Books:**

1. Robert W. Lang (2020). Great Book of Shop Drawings for Craftsman Furniture, Revised & Expanded Second Edition: Authentic and Fully Detailed Plans for 61 Classic Pieces (Fox Chapel Publishing) Complete Full-Perspective Views. Fox Chapel Publishing.
2. Kries, M., Eisenbrand, J., Bassi, A., Ferrari, F., Máčel, O., Pavitt, J., Roode, I.d , Rossi, C., Rüegg, A., Sparke, P., Sudjic, D., Tegethoff, W., Thau, C., Vindum, K., Ward, G.W.R. (2019). Atlas of Furniture Design. Vitra Design Museum.
3. Ching, F.D.K., Corky Binggeli, C. (2018). Interior Design Illustrated (4th Edn.). Wiley.
4. Mcelroy, K.(2017). Prototyping for Designers: Developing the Best Digital and Physical Products. O′Reilly.
5. Lovell, S.(2009). Limited Edition: Prototypes, One-Offs and Design Art Furniture. Birkhauser.

## OPEN ELECTIVES

| **Course Code: DIX 306** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Creative Coding** | 0 | 3 | 3 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | The Student will be able to Retain and Understand the basic knowledge and terminologies of fundamental AI concepts. |
| **CO2** | The Student will be able to Retain and Understand the basic knowledge and terminologies of programming. |
| **CO3** | The Student will be able to develop and compare skills in Creating basic shapes and art forms through coding. |
| **CO4** | The Student will be able to choose and implement motion, interactivity, and dynamic effects in creative coding projects. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 |
| **CO2** | 1 | 1 | 2 | 1 | 2 | 1 | 2 | 1 |
| **CO3** | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 2 |
| **CO4** | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 2 |

**Course Content**

Unit I
FOUNDATIONS OF CREATIVE TECHNOLOGIES
Fundamental AI concepts and hands-on experience with generative AI tools.

Unit II
FOUNDATIONS OF CREATIVE CODING
Explore the fundamentals of creative coding. Understanding the role of coding in design, introduction to coding languages and terminologies (e.g., HTML, CSS, JavaScript). Essential coding concepts like variables, functions, arrays, loops, coordinate systems, and the processing environment.

Unit III
CREATIVE ELEMENTS AND DESIGN
Creating lines, curves, basic shapes, color, and imaging, Drawing complex shapes, patterns and typography. Adding lights, cameras, and materials through code.

Unit IV
INNOVATIVE FURNITURE PROTOTYPING
Modern innovative techniques of form generation and prototyping, Sustainable furniture, Conceptualization, Form Generation and Theme board, Final designed Prototype and post Design Analysis

**Text Books/ Reference Books:**


1. Artut, S. (2023). Geometric Patterns with Creative Coding: Coding for the Arts. Apress.
2. Greenberg, I. (2007). Processing: Creative Coding and Computational Art. Apress.
3. Zhang, y, & Funk M. (2021). Coding Art: The Four Steps to Creative Programming with the Processing Language. Apress.
4. Levin, G., & Brain, T. (2021). Code as Creative Medium: A Handbook for Computational Art and Design. APA Format, The MIT Press.
5. Matthew, D. (2024). Generative Art with JavaScript and SVG: Utilizing Scalable Vector Graphics and Algorithms

## OPEN ELECTIVES

| **Course Code: DIX 308** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Visual Communication** | 0 | 3 | 3 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | Students will understand Studio-based hands-on working & learning with different mediums of visual communication. |
| **CO2** | To illustrate, communicate effectively by graphical and technical means and have competency in visual language. |
| **CO3** | They will justify the scripts with visual representation and analyze the concept of visuals in layouts |
| **CO4** | Students will be capable of creating visual graphics and documenting it. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 |
| **CO2** | 1 | 1 | 2 | 1 | 2 | 1 | 2 | 1 |
| **CO3** | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 2 |
| **CO4** | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 2 |

**Course Content**

Unit-I
INTRODUCTION VISUAL COMMUNICATION
Understanding and defining Visual Communication, types of visual communication, different techniques of communication and its application.

Unit-II
DRAWING AND ILLUSTRATION
Understanding Concept of Illustration and different Illustrative Techniques, Copying of Great Masters, Application of different Illustration techniques and its composition.

Unit-III
VISUAL STORYTELLING
It refers to the method of conveying a narrative or message through visual means, depiction of data, information, concepts, or ideas using graphical styles such as Comic stripes, Story boarding, photography, collages,etc.

Unit-IV
VISUAL COMMUNICATION TRENDS
It refers to the evolving patterns, techniques, technologies, and approaches that influence how visual information is created, presented, and consumed by the audience.

**Text Books/ Reference Books:**


1. Brand , Willemien (2019). *Visual Thinking: Empowering People & Organizations Through Visual Collaboration*. BIS publishers.
2. Kirk, Andy (2019). *Data Visualisation: A Handbook for Data Driven Design Paperback*. SAGE Publications Ltd, US.
3. Caldwell, Cath (2019). *Graphic Design For Everyone*. DK publications.
4. Muller, Jens (2022). *The History of Graphic Design*. Taschen America LIC, US.
5. DK, Judith Miller, Smithsonian Institution (2021). *Design, Second Edition: The Definitive Visual Guide* (DK Definitive Cultural Histories). DK publications.

## OPEN ELECTIVES

| **Course Code: DIX 310** | L/T | S/P | C |
|---|---|---|---|
| **Subject: Environmental Graphic Design** | 0 | 3 | 3 |

**Marking Scheme:**
Teachers Continuous Evaluation: 40 Marks
End Term Practical Examination: 60 Marks

**Course Outcomes :**

| | |
|---|---|
| **CO1** | Students would be able to understand and select effectively the elements of graphic design, art, architecture, lighting and textures for a selected built environment (public or private) as a space of user interactivity and experience. |
| **CO2** | Students would learn the strategic building blocks of wayfinding and signage design, guidelines and standards, fabrication techniques and sustainable materials. |
| **CO3** | Students would retain, understand and apply human-centered design standards in the research and ideation stages of working with all elements from CO1 and CO2 to craft a new visual language for a theme-based spatio-visual experience project. |
| **CO4** | Students would demonstrate new insights and outcomes on interactivity and experience with final testings. |

| **CO/PO** | **PO01** | **PO02** | **PO03** | **PO04** | **PO05** | **PSO01** | **PSO02** | **PSO03** |
|---|---|---|---|---|---|---|---|---|
| **CO1** | 2 | 3 | 1 | 2 | 1 | 3 | 2 | 2 |
| **CO2** | 2 | 3 | 1 | 2 | 1 | 3 | 1 | 2 |
| **CO3** | 3 | 2 | 3 | 3 | 2 | 3 | 1 | 1 |
| **CO4** | 2 | 2 | 2 | 3 | 1 | 3 | 2 | 2 |

**Course Content**

Unit-I
OVERVIEW ON ENVIRONMENTAL GRAPHIC DESIGN [EGD]
3 Main Components of Wayne Hunt's Model, Salient Features, Functions, etc. Placemaking and the scope: Context, Expression, Communication Modes and Technology, Identity and Branding, Trends in EGD: Experiential Field visit(s); including: Modern Art & Culture/ Museums / Multimedia Installations. Group-activity based learning as a special focus during on-site visit.

Unit-II
HUMAN-CENTERED GUIDELINES AND STANDARDS
Society for Environmental Graphic Design (SEGD) standards, Human-Centered Design Guidelines for Public Spaces (Walkability, Continuity, Flexibility and Human-scaled Infrastructure), Areawide Design Guidelines for Public Spaces. Signage Design Guidelines (Interior and Exterior Signage Standards), 8 Design Principles for Wayfinding

Unit-III
EXPERIENTIAL GRAPHICS, SIGNAGE AND WAYFINDING
Wayfinding and Navigation Strategies in Built Spaces (Case Study Research and Design Implementation) as part of a major built-space EGD project (individual project). Designing the User Experience in the built-space would incorporate Meaning of 'Image', Kinds of Materials and Material Trends, Patternmaking, Colour Psychology in Spaces, Typography and Spaces, Structuring, Organizing, Way-knowing, Way-showing, etc.

Unit-IV
INTERACTIVE USER EXPERIENCE IN BUILT-SPACE
EGD Built Space Major Project for Urban Narratives – demonstration and presentation of the study as a tangible spatio-visual experience outcome that validates the applications of proposed Information System, The Graphic System and the Hardware (Materials) system to generate new design methods, strategy and innovation aspects for crafting memorable user experience.

**Text Books/ Reference Books:**

1. Gjoko Muratovski, (2021). *Graphic Life Celebrating Places, Telling Stories, Making Symbols*, Images Publishing Group, US.
2. Nehl, Heiki and, Schlaich, Sibylle (2021). *Airport Wayfinding*, Arthur Niggli Verlag.

3. Poulin, Richard (2018). *The Language of Graphic Design Revised and Updated An Illustrated Handbook for Understanding Fundamental Design Principles,* Rockport Publishers, UK.
4. Fine, Peter, C. (2016). *Sustainable Graphic Design: Principles and Practices* Bloomsbury Publishing, UK.
5. Hodson, Andrew (2015). *Wayfinding Design in the Public Environment.* Images Publishing, US.