

<b>INTERIOR DESIGN STUDIO-IV</b>		Semester	V
Course Code	<b>22BID51</b>	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	6 Hrs. (2:0:0:4)	SEE Marks	50
Total Hours of Pedagogy	90 Hrs. (15 Weeks)	Total Marks	100
Credits	06	Exam Hours	-
Examination type (SEE)	<b>Viva Voce</b>		
<p><b>Course objectives:</b></p> <ul style="list-style-type: none"> <li>The course concentrates on three stages of commercial spaces with an emphasis on planning showrooms , hospitality spaces</li> <li>The main aim is to develop visually literate students who are proficient at analytical thinking, conceptualization and the problem-inquiry, solution cycle.</li> <li>The course also examines the connection between abstract design principles and the physical and visual environments.</li> </ul>			
<p><b>Teaching-Learning Process (General Instructions)</b></p> <ol style="list-style-type: none"> <li>Assign exercises in making different types of models using a variety of materials available in the market.</li> <li>Studios to conduct hands on work with models, sheets, drawings in Basic Design</li> <li>Sketching in various mediums to explore visual arts.</li> <li>Discussions, presentations, and case studies to cover different typologies.</li> <li>Practical field-based exercises to be undertaken, studios help students to work in teams, and get acquainted with live case areas and their problems and help them prepare a professional plan that is relevant to the residents and local bodies, also enables them to critically analyze the area around them and appreciate the same.</li> <li>The portfolio covering all the assignments shall be presented for the Viva exam.</li> </ol>			
<b>Module-1</b>			
<p><b>Markets and Retail Spaces</b> The design of Retail spaces, such as Supermarkets, Fashion Boutiques, Showrooms – study of layouts, display areas, finishing materials and furniture detailing.</p>			
<b>Module-2</b>			
<p><b>Restaurant Interiors</b> Interior designing for multi-functional Restaurants and Banquet halls, multi-level planning, design and detailing of various workspaces, interactions zones. Design of hospitality spaces such as theme-based restaurants, corporate banquet venues etc</p>			
<b>Module-3</b>			
<p><b>Health Care Interiors</b> The design of Health care spaces, such as hospitals, consulting, treatment rooms, Diagnostic facilities – study of special acoustics and functional materials and furniture detailing.</p>			
<b>Module-4</b>			
<p><b>Hospitality Interiors</b> Interiors for hospitality sector- Motels, Bed and Breakfast, Guesthouses, Resorts- Planning, Themes, Layouts, Design of Private and Public Zones.</p>			
<b>Module-5</b>			
<p><b>Minor And Major Project</b> Minor Project- Interiors for a Retail Outlet Major Project- Design of interiors for a Restaurant/ Resort/ Hospital.</p>			
<p><b>Course outcome (Course Skill Set)</b></p> <p>At the end of the course, the student will be able to:</p> <ul style="list-style-type: none"> <li>Introduce the basics of designing for retail spaces including showrooms and restaurant interiors and to develop skills required for the same.</li> </ul>			

**Assessment Details (both CIE and SEE)**

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

**Continuous Internal Evaluation:**

50 CIE marks will be for the Design portfolio presentations/viva/ seminar/models. Split up marks will be decided by the internal examiner based on the projects.

The first internals will be at the end of 40-50% coverage of the syllabus for 25 marks and the second internal evaluation will be after covering 85-90% of the syllabus for 25 marks.

Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for 50 marks.

The student must secure 50% of maximum marks- 20 marks to qualify in the CIE of the professional core course PCC.

**Semester-End Examination:**

50 SEE marks will be viva based assessed by internal examiner and external examiner appointed by the University. (Note: Examiners will be from academia as well as industry experts.)

Evaluation patterns will be based on Design portfolio presentations/ seminars/models. Split up marks will be decided by internal & external examiners based on the projects.

The student must secure a minimum of 35% of maximum marks- (18 marks out of 50 marks) to qualify in the SEE of the professional core course PCC.

**Suggested Learning Resources:****Books**

1. Designs for 20th century Interiors – Fiona Leolie, VH Publications, London, 2000.
2. Interior Design; The New Freedom, BarbaralecDiamonstein, Rizzoli International Publications, New York, 1982.
3. Interior Colour by Design, Jonathan Poore, Rockport Publishers, 1994.
4. Worldwide Interiors – International Federation of Interior Architects & Designers, Rikuyo-Sha, Japan, 1987.

**Web links and Video Lectures (e-Resources):**

- <https://www.archdaily.com/search/projects/categories/hospitality-interiors>
- <https://www.asid.org/>
- <https://www.iccsafe.org/>

**Activity Based Learning (Suggested Activities in Class)/ Practical Based learning**

- Guest Lecture from an expert.
- Various Case Studies

<b>WORKING DRAWING - INTERIORS</b>		Semester	V
Course Code	<b>22BID52</b>	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	4 Hrs. (1:0:0:3)	SEE Marks	50
Total Hours of Pedagogy	60 Hrs. (15 Weeks)	Total Marks	100
Credits	04	Exam Hours	-
Examination type (SEE)	<b>Viva Voce</b>		
<p><b>Course objectives:</b></p> <ul style="list-style-type: none"> <li>• To create precise, measured drawings for sections, plans, elevations, details, and other purposes.</li> <li>• To include all service drawings that will be considered for plumbing, electrical, acoustics, fire and safety, and other related areas.</li> <li>• To specify the standards utilized in the design and to be able to create circulation patterns in the plan.</li> </ul>			
<p><b>Teaching-Learning Process (General Instructions)</b>  These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.</p> <ol style="list-style-type: none"> <li>1.Lecturer method (L) does not mean only the traditional lecture method, but a different type of teaching method may be adopted to develop the outcomes.</li> <li>2.Show Video/animation films to explain concepts.</li> <li>3.Encourage collaborative (Group Learning) Learning in the class.</li> <li>4.Ask at least three HOTS (Higher-order Thinking) questions in the class, which promotes critical thinking.</li> <li>5.Adopt Problem Based Learning (PBL), which fosters students' Analytical skills, develops thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.</li> <li>6.Topics will be introduced in multiple representations.</li> <li>7.Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.</li> <li>8.Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.</li> </ol>			
<b>Module-1</b>			
<p><b>WORKING DRAWINGS</b>  Preparation of working drawings – Suitable scales of drawings, methods of giving dimensions and standards on plans, sections, elevations, details etc.</p>			
<b>Module-2</b>			
<p><b>PLANS</b>  Preparation of plans – Architectural plans, furniture layout floor plans with clearances, different level floor plans, and detailed floor plans of each room.</p>			
<b>Module-3</b>			
<p><b>ELEVATIONS AND SECTIONS</b>  Elevations and Sections – Detailed sectional elevations of all the walls in the interior with all the required dimensions and specifications.</p>			
<b>Module-4</b>			
<p><b>SERVICES</b>  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.</p>			
<b>Module-5</b>			
<p><b>PROJECT</b>  Students shall prepare two working drawing sets, one for a small residence and one for a large building</p>			
<p><b>Course outcome (Course Skill Set)</b>  At the end of the course, the student will be able to:</p> <ol style="list-style-type: none"> <li>1. Ability to resolve spatial concerns with technical aspects of the interiors</li> <li>2. Ability to design and detail components within a building interior.</li> <li>3. Ability to resolve spatial concerns with technical aspects of the interiors</li> <li>4. Ability to design and detail components within a building interior.</li> </ol>			

## Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

### Continuous Internal Evaluation:

50 CIE marks will be for the portfolio presentations/viva/ seminar/models. Split up marks will be decided by the internal examiner based on the projects.

The first internals will be at the end of 40-50% coverage of the syllabus for 25 marks and the second internal evaluation will be after covering 85-90% of the syllabus for 25 marks.

Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for 50 marks.

The student must secure 50% of maximum marks- 20 marks to qualify in the CIE of the professional core course PCC.

### Semester-End Examination:

50 SEE marks will be viva based assessed by internal examiner and external examiner appointed by the University. (Note: Examiners will be from academia as well as industry experts.)

Evaluation patterns will be based on Design portfolio presentations/ seminars/models. Split up marks will be decided by internal & external examiners based on the projects.

The student must secure a minimum of 35% of maximum marks- (18 marks out of 50 marks) to qualify in the SEE of the professional core course PCC.

## Suggested Learning Resources:

### Books

1. Leibing. W. Ralph, Architectural Working Drawings, 4th edition, John wiley and sons, New York, 1999.
2. Macey. W. Frank, Specification in detail, 2nd edition, Technical press ltd, London, 2009.
3. Shah, M.G.; and others, Building Drawing: An integrated approach to build environment, 3rd ed, Tata McGraw Hill Pub. Co. Ltd, New Delhi, 1996.
4. Fredd Stitt, Working Drawing Manual, McGraw-Hill Professional; 1st edition, 1998.
5. Kilmer, Working Drawings and Details for Interiors, John Wiley and Son 2009
6. De Chiara and Callender – Time Saver Standards for interior design, 1982.
7. De Chiara et al – Time Saver standards for interior design and space planning, Mcgraw Hill, 1982

### Web links and Video Lectures (e-Resources):

- <https://www.ncarb.org/>
- <https://www.bis.gov.in/>

### Activity Based Learning (Suggested Activities in Class)/ Practical Based learning.

<b>CREATIVE ART AND CRAFT IN INTERIORS</b>		Semester	V
Course Code	<b>22BID53</b>	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	3 Hrs. (2:0:1:0)	SEE Marks	50
Total Hours of Pedagogy	45 Hrs. (15 Weeks)	Total Marks	100
Credits	03	Exam Hours	3 Hours
Examination type (SEE)	<b>Theory</b>		
<p><b>Course objectives:</b></p> <ul style="list-style-type: none"> <li>• Detailed study of the characteristics of Indian arts and crafts and its application in the interiors.</li> <li>• To enable students to understand various art cultures in various cities of our country</li> <li>• To appreciate art and craft based on the various eras in art and craft history.</li> <li>• To bring different thinking levels of art like decoupage framing, etc.</li> <li>• To enable students to create products rich in art and the culture of the given state.</li> <li>• To enable students to conceptualize interior design in various art forms.</li> </ul>			
<p><b>Teaching-Learning Process (General Instructions)</b></p> <p>These are sample Strategies that teachers can use to accelerate the attainment of the various course outcomes.</p> <ol style="list-style-type: none"> <li>1. Lecturer method (L) does not mean only the traditional lecture method, but a different type of teaching method may be adopted to develop the outcomes.</li> <li>2. Show Video/animation films to explain concepts.</li> <li>3. Encourage collaborative (Group Learning) Learning in the class.</li> <li>4. Ask at least three HOTS (Higher-order Thinking) questions in the class, which promotes critical thinking.</li> <li>5. Adopt Problem Based Learning (PBL), which fosters students' Analytical skills, develops thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.</li> <li>6. Topics will be introduced in multiple representations.</li> <li>7. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.</li> <li>8. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.</li> </ol>			
<b>Module-1</b>			
<b>INTRODUCTION TO CREATIVE ARTS AND CRAFTS</b>			
Introduction to creative arts and crafts in India – its application in interior design – materials – Art movements through history – Traditional arts and crafts of India – Folk arts of India			
<b>Module-2</b>			
<b>TRADITIONAL ARTS AND CRAFTS OF INDIA</b>			
Traditional arts and crafts of various states of India including – Tamilnadu, Karnataka, Kerala, Andhra Pradesh, Goa, Rajasthan, Gujarat, Kutch, Uttar Pradesh, West Bengal, Orissa, Bihar, Jammu and Kashmir, etc.			
<b>Module-3</b>			
<b>ART MOVEMENTS IN POST MODERN INDIA</b>			
Art Movements in Post Modern India and their influences in Interior design – Abstract Expressionism, Pop art, Minimal art, Conceptual art – Neo Expressionism – Computers in Arts.			
<b>Module-4</b>			
<b>CREATING ARTISTIC OBJECTS</b>			
Picture framing, macramé, decoupage, wall hangers, ceramic painting, murals and other artistic objects for interiors.			
<b>Module-5</b>			
<b>APPLICATION OF ART IN INTERIOR SPACES</b>			
Assignment or projects on application of the Art in interior spaces such as – Reception, Lobby spaces, Theme Boutiques, Hotel, Restaurants, Offices.			
<b>Course outcome (Course Skill Set)</b>			
At the end of the course, the student will be able to:			
<ul style="list-style-type: none"> <li>• To appreciate the various styles of Interior detailing through art and craft worldwide.</li> <li>• To understand the unconventional methods of practicing art in various states of our country.</li> <li>• To create objects concerning the applications of knowledge gained.</li> <li>• To understand various styles of art and craft from various parts of the world.</li> <li>• To understand various art movements and their importance in the revolution of art and craft</li> </ul>			

### Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

#### Continuous Internal Evaluation:

- There are 25 marks for the CIE's Assignment component and 25 for the Internal Assessment Test component.
- Each test shall be conducted for 25 marks. The first test will be administered after 40-50% of the coverage of the syllabus, and the second test will be administered after 85-90% of the coverage of the syllabus. The average of the two tests shall be scaled down to 25 marks
- Any two assignment methods mentioned in the 22OB2.4, if an assignment is project-based then only one assignment for the course shall be planned. The schedule for assignments shall be planned properly by the course teacher. The teacher should not conduct two assignments at the end of the semester if two assignments are planned. Each assignment shall be conducted for 25 marks. (If two assignments are conducted then the sum of the two assignments shall be scaled down to 25 marks)
- The final CIE marks of the course out of 50 will be the sum of the scale-down marks of tests and assignment/s marks.

**Internal Assessment Test question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.**

#### Semester-End Examination:

Theory SEE will be conducted by University as per the scheduled timetable, with common question papers for the course (**duration 03 hours**).

- The question paper will have ten questions. Each question is set for 20 marks.
- There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub-questions), **should have a mix of topics** under that module.
- The students have to answer 5 full questions (for 100 marks), selecting one full question from each module. Marks scored shall be proportionally reduced to 50 marks.

#### Suggested Learning Resources:

##### Books

1. Edith Thomory, A History of fine arts in India and the west, Orient Longman publishers Pvt Ltd, New Delhi. 2004
2. Publication on Traditional arts and crafts in India, Ministry of Handicrafts Development, Government of India. 2018
3. Deidi von Schaewen, Sunil Sethi, Indian Interiors, Taschen, 2004
4. Jaya Jaitly, Aman Nath, Indian Crafts Interiors, Mapin Publishing Pvt. Limited, 2023

#### Web links and Video Lectures (e-Resources):

- <https://www.nid.edu/home>
- <https://artradarjournal.com/>

#### Activity Based Learning (Suggested Activities in Class)/ Practical Based learning.

- Hands-on Exploration of Traditional and Contemporary Techniques
- Interactive Research and Design Projects
- Collaborative Studio Assignments and Real-World Applications

<b>SERVICES III (LIGHTING &amp; ACOUSTICS)</b>		Semester	V
Course Code	<b>22BID54</b>	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	3 Hrs. (2:0:1:0)	SEE Marks	50
Total Hours of Pedagogy	30 Hrs. (15 Weeks)	Total Marks	100
Credits	02	Exam Hours	3 Hours
Examination type (SEE)	<b>Theory</b>		
<b>Course objectives:</b> <ul style="list-style-type: none"> <li>• To help the student understand day lighting and technology of artificial lighting.</li> <li>• To equip the student to understand and successfully apply lighting techniques with colour effects.</li> <li>• To expose the students to the basic principles of acoustics in interiors.</li> </ul>			
<b>Teaching-Learning Process (General Instructions)</b> These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes. <ol style="list-style-type: none"> <li>1. Lecturer method (L) does not mean only the traditional lecture method, but a different type of teaching method may be adopted to develop the outcomes.</li> <li>2. Show Video/animation films to explain concepts.</li> <li>3. Encourage collaborative (Group Learning) Learning in the class.</li> <li>4. Ask at least three HOTS (Higher-order Thinking) questions in the class, which promotes critical thinking.</li> <li>5. Adopt Problem Based Learning (PBL), which fosters students' Analytical skills, develops thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.</li> <li>6. Topics will be introduced in multiple representations.</li> <li>7. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.</li> <li>8. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.</li> </ol>			
<b>Module-1</b>			
<b>Introduction to Lighting Design and Natural and Artificial Lighting Integration</b> Principles of light and human perception, Historical overview and evolution of lighting in interior design, Properties of light (color temperature, intensity, distribution), Lighting terminology and measurement (lux, lumen, CRI), Daylighting principles and strategies, Balancing natural and artificial light sources for optimal interior illumination.			
<b>Module-2</b>			
<b>Types of Lighting Fixtures and Lighting Design Techniques</b> Overview of lighting fixture types (e.g., recessed, track, pendant), Understanding lighting control systems (dimming, zoning, smart controls), Task, ambient, accent, and decorative lighting applications, Techniques for highlighting architectural features and artwork. Lighting for Different Interior Environments- Residential interiors: Bedrooms, kitchens, living rooms, Commercial interiors: Offices, retail spaces, hospitality environments.			
<b>Module-3</b>			
<b>Introduction to Acoustics</b> Definition, Theory of sound generation, transmission – reception of sound – Terms related to acoustics – sound waves, frequency, intensity, wavelength – measurement of sound, Characteristics of speech – Making of sound – Human ear characteristics – Behavior of sound in enclosed space – Reverberation, RT, Optimum reverberation, simple exercise using Sabine's formula.			
<b>Module-4</b>			
<b>Sound Absorption, Insulation, Sound Reinforcement and Noise Control</b> Sound absorption, absorption coefficient and their measurements – sound absorbing materials – sound insulation – materials – sound amplification and sound reinforcement, Sources and types of noise – effect on human behavior, noise curves, transmission of noise – noise control – materials and techniques.			
<b>Module-5</b>			
<b>Lighting and Acoustics in Buildings</b> Design and detailing – Basic principles in designing of lecture halls, auditorium, theaters, cinema halls, broadcasting studio, recording studio.			

### Course outcome (Course Skill Set)

At the end of the course, the student will be able to:

- To be Sensitive towards evolution of different color combinations and realization of color in different lighting.
- To be able to make electrical drawings with apt representation and accommodating different types of lighting details.
- To create awareness of sustainable principles and best practices along with acoustics and detailing.

### Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks(18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

#### Continuous Internal Evaluation:

- There are 25 marks for the CIE's Assignment component and 25 for the Internal Assessment Test component.
- Each test shall be conducted for 25 marks. The first test will be administered after 40-50% of the coverage of the syllabus, and the second test will be administered after 85-90% of the coverage of the syllabus. The average of the two tests shall be scaled down to 25 marks
- Any two assignment methods mentioned in the 22OB2.4, if an assignment is project-based then only one assignment for the course shall be planned. The schedule for assignments shall be planned properly by the course teacher. The teacher should not conduct two assignments at the end of the semester if two assignments are planned. Each assignment shall be conducted for 25 marks. (If two assignments are conducted then the sum of the two assignments shall be scaled down to 25 marks)
- The final CIE marks of the course out of 50 will be the sum of the scale-down marks of tests and assignment/s marks.

**Internal Assessment Test question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.**

#### Semester-End Examination:

Theory SEE will be conducted by University as per the scheduled timetable, with common question papers for the course (duration 03 hours).

- The question paper will have ten questions. Each question is set for 20 marks.
- There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub-questions), **should have a mix of topics** under that module.
- The students have to answer 5 full questions(for 100 marks), selecting one full question from each module. Marks scored shall be proportionally reduced to 50 marks.

#### Suggested Learning Resources:

##### Books

1. Joseph Aronson, The Encyclopedia of Furniture: Third Edition ,2061
2. Bradley Quinn, Mid-Century Modern: Interiors, Furniture, Design Details, Conran Octopus Interiors, 2006.
3. Jim Postell, Furniture Design, Wiley publishers, 2007.
4. Edward Lucie-Smith , Furniture: A Concise History (World of Art) , Thames and Hudson, 2085
5. Robbie. G. Blakemore, History of Interior Design and Furniture: From Ancient Egypt to NineteenthCentury Europe, Wiley publishers, 2005.
6. John.F. Pile, Interior Design, 2nd edition, illustrated, H.N.Abrams, 2095
7. Peter Templeton & Saunders – Detailing for architectural acoustics – Architectural press, 1994.

#### Web links and Video Lectures (e-Resources):

- <https://lightlouver.com/design-information/lighting-terminology/>
- <https://acoustics.org/>



**Activity Based Learning (Suggested Activities in Class)/ Practical Based learning.**

- Lighting Analysis and Design Exercises
- Workshops - Hands-on Experiments with Lighting and Color Effects
- Acoustic Analysis and Application- acoustic studies by building scaled interior models with different materials

<b>COMPUTER APPLICATIONS -III (ADVANCED)</b>			
Course Code	<b>22BID55</b>	CIE Marks	100
Teaching Hours/Week (L:T:P: S)	2 Hrs (0:1:0:1)	SEE Marks	-
Total Hours of Pedagogy	30 Hrs. (15 Weeks)	Total Marks	100
Credits	02	Exam Hours	-
<p><b>Course objectives:</b></p> <ol style="list-style-type: none"> <li>To familiarize the students with the concepts of 3D modelling.</li> <li>To enable them to experiment with forms, mapping, rendering and presentation techniques.</li> </ol>			
<p><b>Teaching Learning process</b></p> <ol style="list-style-type: none"> <li>Introduction to Interior Design Software</li> <li>Basic Skills Development and Project-Based Learning</li> <li>Contextualized Learning</li> </ol>			
<b>Module-1</b>			
<b>Introduction to 3d Software and Modeling Techniques</b>			
<p><b>Overview of 3d software interface and workflow:</b> Basic navigation: viewport controls, viewports layout. Understanding the coordinate system and unit setup. Introduction to object creation and selection.</p> <p><b>Modeling Techniques:</b> Creating primitives: box, cylinder, sphere, etc. Modifying objects with Edit Poly modifier: extrude, bevel, inset, etc. Working with splines: creating walls, floors, and other architectural elements. Using symmetry and mirror modifiers for efficiency</p> <p>Loft and Sweep modifiers for creating complex shapes. Using Boolean operations for combining and subtracting geometry. Creating custom furniture and fixtures. Introduction to parametric modeling with modifiers and deformers</p>			
<b>Module-2</b>			
<b>Advanced Rendering and Presentation</b>			
<p>Materials and Textures: Applying materials to objects: standard materials, multi/sub-object materials.</p> <p>Adjusting material properties: diffuse, specular, glossiness, etc. Using UVW mapping and unwrap UVW modifier for texture mapping. Creating custom materials and textures using procedural maps.</p> <p>Lighting and Rendering: Setting up interior lighting: standard lights, photometric lights. Using daylight system and HDRI lighting for natural illumination. Introduction to mental ray and V-Ray rendering engines. Adjusting render settings for quality and efficiency.</p> <p>Advanced Rendering and Presentation: Fine-tuning render settings for realistic results. Post-processing renderings in Photoshop: adjusting colors, adding effects. Creating panoramic and 360-degree renderings for virtual tours. Compiling final presentation boards and visualizations</p>			
<b>Module-3</b>			
<b>Rendering Engines - Introduction</b>			
<p><b>Introduction to Rendering with V-Ray:</b> Overview of V-Ray interface and workflow. Basic rendering concepts: materials, textures, lighting. Setting up a rendering scene in SketchUp. Introduction to V-Ray materials and texture mapping.</p> <p><b>Material Creation and Texturing:</b> Exploring V-Ray material editor. Creating realistic materials: wood, glass, metal, fabric, etc. Applying textures and mapping techniques. Understanding material properties: diffuse, reflection, glossiness, etc.</p>			
<b>Module-4</b>			

## Rendering Engines - Advanced I

Lighting Techniques: Setting up interior lighting: V-Ray lights, dome lights, HDRIs. Adjusting lighting intensity and color temperature. Using a V-Ray physical camera for realistic lighting effects. Introduction to artificial lighting fixtures.

Advanced Rendering Settings: Fine-tuning render settings for quality and efficiency. Exploring V-Ray render elements for post-processing. Optimizing render settings for interior scenes. Batch rendering and distributed rendering options.

### Module-5

## Rendering Engines - Advanced II

**Introduction to Enscape:** Overview of Enscape interface and features. Integrating Enscape into SketchUp workflow. Setting up Enscape settings for interior visualization. Real-time rendering and navigation controls.

**Enscape Walkthroughs and Presentations:** Creating walkthrough animations in Enscape. Exporting and sharing Enscape presentations. Enhancing Enscape renderings with post-processing effects.

### Course outcome (Course Skill Set)

At the end of the course the student will be able to:

1. Develop proficiency in using V-Ray and Enscape for interior visualization.
2. Develop presentation skills for communicating design ideas effectively through rendered images and walkthroughs.

## Assessment Details (both CIE and SEE)

**CIE marks for this component are 100 marks.**

- Portfolio Assessment - 50 CIE marks will be for the Design portfolio presentations/viva/ seminar/models. Split-up marks will be decided by the internal examiner based on the projects.
- The first internals (project base assignment) will be at the end of 40-50% coverage of the syllabus for 25 marks and the second internal (Project base assignment) will be after covering 85-90% of the syllabus for 25 marks.
- Scaled-down marks of the sum of two internals and Portfolio assessment methods will be CIE marks for 100 marks.
- The student has to secure 40% of maximum marks- 100 marks to qualify in the CIE of the professional core course

### Suggested Learning Resources:

#### Books

1. Bradley, B. Photographic Rendering with V-Ray for SketchUp. United Kingdom: Packt Publishing 2014
2. Cardoso, J. 3D Photorealistic Rendering: Interiors & Exteriors with V-Ray and 3ds Max. United States: CRC Press. 2017
3. Kuhlo, M. Architectural Rendering with 3ds Max and V-Ray: Photorealistic Visualization. United Kingdom: CRC Press. 2013.
4. Burival, K. The Complete Guide to Visualization with Enscape: Connect Enscape 3.X to Your Workflows to Enable Dynamic Real-Time Rendering for AEC Professionals. (n.p.): Packt Publishing, Limited. 2023.

### Web links and Video Lectures (e-Resources):

- <https://professional3dservices.com/blog/3d-modeling-techniques.html>

### Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Hands-On Practice with Rendering Tools
- Post-processing exercises using Photoshop or V-Ray render elements

<b>WORKSHOP- ENGINEERED MATERIALS</b>		Semester	V
Course Code	<b>22BID56</b>	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	2 Hrs. (0:0:0:2)	SEE Marks	50
Total Hours of Pedagogy	30 Hrs. (15 Weeks)	Total Marks	100
Credits	02	Exam Hours	-
Examination type (SEE)	<b>Term Work</b>		
<p><b>Course objectives:</b></p> <ul style="list-style-type: none"> <li>• To understand the basic methods of furniture making with focus on hands-on methods regarding workshop practices in wood, metal, plastic, textiles etc.</li> <li>• To understand the usage of various materials as required with its properties.</li> <li>• To understand the usage of engineered wood against solid wood.</li> <li>• To understand the fixing details of multiple materials and its interaction with each other.</li> <li>• To be introduced to alternate materials</li> <li>• To relate the various capacities into creative pursuits of design.</li> </ul>			
<p><b>Teaching Learning process</b>  <b>These are sample Strategies that teachers can use to accelerate the attainment of the various course outcomes.</b></p> <ol style="list-style-type: none"> <li>1. Lecturer method (L) does not mean only the traditional lecture method, but a different type of teaching method may be adopted to develop the outcomes.</li> <li>2. Show Video/animation films to explain concepts.</li> <li>3. Encourage collaborative (Group Learning) Learning in the class.</li> <li>4. Ask at least three HOTS (Higher-order Thinking) questions in the class, which promotes critical thinking.</li> <li>5. Adopt Problem Based Learning (PBL), which fosters students' Analytical skills, develops thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.</li> <li>6. Topics will be introduced in multiple representations.</li> <li>7. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.</li> <li>8. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.</li> </ol>			
<b>Module-1</b>			
<p><b>Wood</b>  Types of wood –natural and artificial and its properties  Engineered wood – plywood, MDF, HDF, Etc  Working with wood and wood products to understand material parameters. Wooden joinery and its strength.  Wood polishes and other finishes – color and surface quality. Laminates also should be treated as one of the wood finishes with lapping and other techniques</p>			
<b>Module-2</b>			
<p><b>Scales</b>  Making of elements of various scales in the built form such as interior space making elements, furniture forms, various products, Art &amp; Artifacts by using wood.</p>			
<b>Module-3</b>			
<p><b>Alternative Materials</b>  Introduction to cane, bamboo, working with bamboo/cane and their products to understand material parameters. Bamboo and cane joinery and its strength. Polishes and other finishes. 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.</p>			
<b>Module-4</b>			
<p><b>Glass</b>  Working with glass and understand blowing techniques, hardware fixing, polishing, etching, sand blasting techniques of the glass material. Understanding of the properties and using the same in an exercise to create 3d model with glass. Also understanding the usage and fixing of glass in various interior models.</p>			
<b>Module-5</b>			

<p><b>Design of Space</b>          Designing a space (modular furniture) using engineered materials. To understand the various material fixtures and properties for different applications.</p>
<p><b>Course outcome (Course Skill Set)</b></p> <p>At the end of the course, the student will be able to:</p> <ol style="list-style-type: none"> <li>1. Ability to understand and construct furniture to live size</li> <li>2. understanding the scale of drawing to life size</li> <li>3. To use tools related to wood glass and alternative substitution to wood.</li> <li>4. To understand properties and usage of materials henceforth.</li> <li>5. To understand modular furniture through engineered wood.</li> <li>6. To understand the various capacities of hardware for the various materials.</li> <li>7. To understand wood joints and its usage in various circumstances.</li> </ol>
<p><b>Assessment Details (both CIE and SEE)</b></p> <p><b>Assessment Details (both CIE and SEE)</b>          The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks(18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.</p> <p><b>Continuous Internal Evaluation:</b></p> <ul style="list-style-type: none"> <li>• 50 CIE marks will be for the Design portfolio presentations/viva/ seminar/models. Split up marks will be decided by the internal examiner based on the projects.</li> <li>• The first internals will be at the end of 40-50% coverage of the syllabus for 25 marks and the second internal evaluation will be after covering 85-90% of the syllabus for 25 marks.</li> <li>• Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for 50 marks.</li> <li>• The student must secure 50% of maximum marks- 20 marks to qualify in the CIE of the professional core course PCC.</li> </ul> <p><b>Semester-End Examination:</b></p> <ul style="list-style-type: none"> <li>• 50 SEE marks will be Term Work assessed by internal examiner and external examiner appointed by the University. (Note: Examiners will be from academia as well as industry experts.)</li> <li>• Evaluation patterns will be based on Design portfolio presentations/ seminars/models. Split up marks will be decided by internal &amp; external examiners based on the projects.</li> </ul> <p>The student must secure a minimum of 35% of maximum marks- (18 marks out of 50 marks) to qualify in the SEE of the professional core course PCC.</p>
<p><b>Suggested Learning Resources:</b></p> <p><b>Books</b></p> <ol style="list-style-type: none"> <li>1. Carol Stangler, The crafts and art of Bamboo, Rev. updated edition, Lark books, 2009.</li> <li>2. Dr Angelika Taschen, Bamboo style: Exteriors, Interiors, Details, illustrated edition, 2006.</li> <li>3. Albert Jackson &amp; David Day, The complete manual of wood working, knopf publishers, 2096.</li> <li>4. Lonnie Bird, Jeff Jewitt, Thomas lie- Nielsen, Taunton's Complete Illustrated Guide to</li> <li>5. Woodworking, Taunton, 2005.</li> <li>6. Peter Korn, Wood working Basics: Mastering the essentials of craftsmanship, Taunton , 2003.</li> </ol>
<p><b>Web links and Video Lectures (e-Resources):</b></p> <ul style="list-style-type: none"> <li>• <a href="https://www.guadubamboo.com/working-with-bamboo#:~:text=Split%20bamboo%20is%20often%20used,depends%20on%20your%20own%20creativity.&amp;text=Bending%20bamboo%2C%20isn't%20that,shape%2C%20or%20by%20applying%20heat.">https://www.guadubamboo.com/working-with-bamboo#:~:text=Split%20bamboo%20is%20often%20used,depends%20on%20your%20own%20creativity.&amp;text=Bending%20bamboo%2C%20isn't%20that,shape%2C%20or%20by%20applying%20heat.</a></li> <li>• <a href="https://www.daedalianglassstudios.com/glass-design/guide-to-glassworking-techniques/#:~:text=Hot%20Glass%20is%20glass%20created,we%20are%20all%20familiar%20with.">https://www.daedalianglassstudios.com/glass-design/guide-to-glassworking-techniques/#:~:text=Hot%20Glass%20is%20glass%20created,we%20are%20all%20familiar%20with.</a></li> </ul>
<p><b>Activity Based Learning (Suggested Activities in Class)/ Practical Based learning.</b></p> <ul style="list-style-type: none"> <li>• Material Handling and Craftsmanship Exercises</li> <li>• Scale Exploration and Prototyping</li> <li>• Collaborative Design Projects with Engineered Materials</li> </ul>

<b>ELECTIVE -III</b>			
Course Code	<b>22BID57</b>	CIE Marks	100
Teaching Hours/Week (L:T:P: S)	2 Hrs (2:0:0:0)	SEE Marks	-
Total Hours of Pedagogy	30 Hrs. (15 Weeks)	Total Marks	100
Credits	01	Exam Hours	-
<p><b>Course objectives:</b></p> <ol style="list-style-type: none"> <li>1. To gain experience in aspects of Interior Design not offered in the regular curriculum.</li> <li>2. To study areas of the curriculum in greater depth.</li> <li>3. To explore career opportunities in the allied fields.</li> </ol>			
<p><b>Teaching-Learning Process (General Instructions)</b></p> <p>These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.</p> <ol style="list-style-type: none"> <li>1. Lecturer method (L) does not mean only the traditional lecture method, but a different type of teaching method may be adopted to develop the outcomes.</li> <li>2. Show Video/animation films to explain concepts.</li> <li>3. Encourage collaborative (Group Learning) Learning in the class.</li> <li>4. Ask at least three HOTS (Higher-order Thinking) questions in the class, which promotes critical thinking.</li> <li>5. Adopt Problem Based Learning (PBL), which fosters students' Analytical skills, develops thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.</li> <li>6. Topics will be introduced in multiple representations.</li> <li>7. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.</li> <li>8. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.</li> </ol>			
<p><b>a. Eco Friendly Interiors</b></p> <p><b>OBJECTIVE:</b></p> <ul style="list-style-type: none"> <li>• To understanding Sustainable Design Principles</li> <li>• To exploring Eco-Friendly Materials and Practices</li> <li>• To developing Skills for Sustainable Design Implementation</li> </ul> <p><b>OUTLINE:</b></p> <p><b>Introduction to Sustainable Interior Design:</b> Overview of sustainable design principles in interior design, Importance of eco-friendly interiors for health and well-being, Green building certifications (LEED, WELL) and their relevance to interior design, Case studies of iconic eco-friendly interior projects</p> <p><b>Sustainable Materials for Interiors:</b> Evaluation of sustainable materials (e.g., reclaimed wood, bamboo, cork, recycled materials), Understanding material life cycles and environmental impacts, Criteria for selecting eco-friendly materials based on sustainability certifications, Integration of natural materials and finishes in interior design, Exploring innovative bio-based and renewable materials</p> <p><b>Energy Efficiency in lighting</b> Importance of energy-efficient design in interior spaces, Strategies for optimizing natural lighting and ventilation, Selection and integration of energy-saving appliances and fixtures</p> <p><b>Energy Efficiency in heating and cooling</b> Introduction to sustainable HVAC (heating, ventilation, air conditioning) systems, Smart technologies for energy monitoring and management in interiors</p> <p><b>Sustainable Practices and Design Strategies</b> Implement sustainable design strategies in interior projects by designing a space while considering eco-friendly elements.</p> <p><b>REFERENCES</b></p> <ol style="list-style-type: none"> <li>1. Sustainable Residential Interiors by Annette Stelmack, Associates III, Kari Foster and Debbie Hindman</li> <li>2. Wellness by Design: A Room-By-Room Guide to Optimizing Your Home for Health, Fitness, and Happiness by Jamie Gold</li> <li>3. Design a Healthy Home: 100 Ways to Transform Your Space for Physical and Mental Wellbeing by Oliver Heath</li> </ol>			

4. Green Interior Design: The Guide to Sustainable High Style by Lori Dennis and Courtney Porter

**b. Adaptive Reuse and Recycle in interiors.**

**OBJECTIVE:**

- To gain an in-depth understanding of sustainable design principles and practices
- To apply sustainable design strategies to real-world scenarios, emphasizing the importance of responsible resource management and the benefits of adaptive reuse and recycling in reducing waste and carbon footprint.

**OUTLINE:**

**Introduction to Adaptive Reuse and Recycle**

Overview of adaptive reuse and recycling principles in interior design, Importance of sustainable practices in the built environment, Historical context and examples of successful adaptive reuse projects, Key concepts: reduce, reuse, recycle, and repurpose, Case studies highlighting innovative approaches to adaptive reuse in interiors.

**Evaluating Existing Spaces for Adaptive Reuse**

Methods for assessing existing buildings and spaces for adaptive reuse potential, Understanding structural considerations and building codes, Design strategies for preserving historic and architectural elements, Sustainable demolition practices and salvage techniques.

**Repurposing Materials and Furnishings**

Identification of reusable materials and furnishings in interior design, Techniques for repurposing and upcycling furniture and fixtures.

**Sustainable Construction Techniques**

Introduction to sustainable construction methods and practices, Integration of eco-friendly building materials into interior projects, Energy-efficient retrofitting and adaptive building systems.

**Final project**

Developing a comprehensive adaptive reuse design proposal.

**REFERENCES**

1. Reclaimed: New Homes from Old Materials by Penny Craswell
2. Sustainable Architecture: Contemporary Architecture in Detail by The Plan
3. What's Wrong with That Door? Simple Steps to Put Your Finger on the Cause of Any Problem with a Door by John Quist
4. Recycled As Restaurants: Case Studies in Adaptive Reuse by Virginia Croft

**Assessment Details (both CIE and SEE)**

**CIE marks for this component are 100 marks.**

- Portfolio Assessment - 50 CIE marks will be for the Design portfolio presentations/viva/ seminar/models. Split-up marks will be decided by the internal examiner based on the projects.
- The first internals (project base assignment) will be at the end of 40-50% coverage of the syllabus for 25 marks and the second internal (Project base assignment) will be after covering 85-90% of the syllabus for 25 marks.
- Scaled-down marks of the sum of two internals and Portfolio assessment methods will be CIE marks for 100 marks.
- The student has to secure 40% of maximum marks- 100 marks to qualify in the CIE of the professional core course

**Suggested Learning Resources:**

**Books**

**Web links and Video Lectures (e-Resources):**

- <https://www.augmentecture.com/blog/sustainability-in-interior-design/>
- <https://www.archdaily.com/992144/what-can-be-done-to-make-interiors-more-sustainable>

**Activity Based Learning (Suggested Activities in Class)/ Practical Based learning**

<b>INTERIOR DESIGN STUDIO -V</b>		Semester	VI
Course Code	<b>22BID61</b>	CIE Marks	50
Teaching Hours/Week (L: T:P: S)	6 Hrs. (2:0:0:4)	SEE Marks	50
Total Hours of Pedagogy	90Hrs (15 Weeks)	Total Marks	100
Credits	06	Exam Hours	-
Examination type (SEE)	<b>Viva Voce</b>		
<p><b>Course objectives:</b></p> <ul style="list-style-type: none"> <li>To study and develop innovative schemes for hotel and auditorium interiors.</li> <li>Knowledge of working drawings is also intended.</li> </ul>			
<p><b>Teaching-Learning Process (General Instructions)</b>  These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.</p> <ol style="list-style-type: none"> <li>Assign exercises in making different types of models using a variety of materials available in the market.</li> <li>Studios to conduct hands on work with models, sheets, drawings in Basic Design</li> <li>Sketching in various mediums to explore visual arts.</li> <li>Discussions, presentations, and case studies to cover different typologies.</li> <li>Practical field-based exercises to be undertaken, studios help students to work in teams, and get acquainted with live case areas and their problems and help them prepare a professional plan that is relevant to the residents and local bodies, also enables them to critically analyse the area around them and appreciate the same.</li> </ol> <p>The portfolio covering all the assignments shall be presented for the Viva exam.</p>			
<b>Module-1</b>			
<p><b>Auditorium</b>  Spatial and environmental standards for various auditorium – performing arts, cinema, convention centre. Detail schematics of wall paneling, false ceiling and carpeting to satisfy acoustic requirements. Lighting study to develop ideas for foyer, auditorium and stage requirements.</p>			
<b>Module-2</b>			
<p><b>Five Star Hotels</b>  Spatial and service standards for five-star hotels – integration of interior design schemes for rooms, restaurants, bars, health clubs, shopping arcade and other guest areas with the general theme of the hotel. Special ideas for suites and banquet halls – contemporary interior schemes to integrate new concepts in lighting and materials.</p>			
<b>Module-3</b>			
<p><b>Arts And Crafts Centers</b>  Spatial and environmental standards for various arts and crafts centers, museums, cultural centers.. Detail schematics of wall paneling, false ceiling and carpeting to satisfy acoustic requirements. Lighting study to develop ideas for foyer, display, stage</p>			
<b>Module-4</b>			
<p><b>Theaters And Multiplexes</b>  Spatial and service standards for theatres – Performing art spaces, Theatres, Multiplexes. Study on Acoustic Design, Lighting, and experience design. Layout of performance and non-performance spaces in a theatre.</p>			
<b>Module-5</b>			
<p><b>Minor And Major Project</b>  Minor Project- Interiors for an Art and Craft Center/ Museum.  Major Project- Design of interiors for star rated hotels/ Multiplexes/ theaters/ Performing arts center.</p>			



**Course outcome (Course Skill Set)**

At the end of the course, the student will be able to:

1. Design for Hospitality industry- exposure to design standards in star rated hotels.
2. Analyse about interior design possibilities in the auditorium.

**Assessment Details (both CIE and SEE)**

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks(18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

**Continuous Internal Evaluation:**

- 50 CIE marks will be for the Design portfolio presentations/viva/ seminar/models. Split up marks will be decided by the internal examiner based on the projects.
- The first internals will be at the end of 40-50% coverage of the syllabus for 25 marks and the second internal evaluation will be after covering 85-90% of the syllabus for 25 marks.
- Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for 50 marks.
- The student must secure 50% of maximum marks- 20 marks to qualify in the CIE of the professional core course PCC.

**Semester-End Examination:**

- 50 SEE marks will be viva based assessed by internal examiner and external examiner appointed by the University. (Note: Examiners will be from academia as well as industry experts.)
- Evaluation patterns will be based on Design portfolio presentations/ seminars/models. Split up marks will be decided by internal & external examiners based on the projects.
- The student must secure a minimum of 35% of maximum marks- (18 marks out of 50 marks) to qualify in the SEE of the professional core course PCC.

**Suggested Learning Resources:****Books**

1. Designs for 20th century Interiors – Fiona Leolie, VH Publications, London, 2000.
2. Interior Design; The New Freedom, BarbaralecDiamonstein, Rizzoli International Publications, New York, 1982.
3. Interior Colour by Design, Jonathan Poore, Rockport Publishers, 1994.
4. Worldwide Interiors – International Federation of Interior Architects & Designers, Rikuyo-Sha, Japan, 1987.

**Web links and Video Lectures (e-Resources):**

- <https://www.archdaily.com/>
- <https://www.designboom.com/>
- <https://icom.museum/en/>

**Activity Based Learning (Suggested Activities in Class)/ Practical Based learning**

- Design Charrette Workshops
- Material and Finish Selection Exercise
- Site Visit and Analysis

<b>INTERIOR LANDSCAPE</b>		Semester	VI
Course Code	<b>22BID62</b>	CIE Marks	50
Teaching Hours/Week (L: T:P: S)	4 Hrs. (1:0:0:3)	SEE Marks	50
Total Hours of Pedagogy	60Hrs (15 Weeks)	Total Marks	100
Credits	04	Exam Hours	-
Examination type (SEE)	<b>Viva Voce</b>		
<p><b>Course objectives:</b></p> <ul style="list-style-type: none"> <li>To develop an understanding about the design of interior landscape</li> <li>To give special emphasis on the choice and care of plant materials used in the interior spaces.</li> <li>To study about the various landscaping elements and their application in interior spaces.</li> <li>To develop an understanding between outdoor and indoor landscape areas.]</li> <li>To have apt knowledge of the regional or vernacular plantation to use in particular regions and climates.</li> <li>To understand the various features using natural and manmade elements in landscape detailing.</li> </ul>			
<p><b>Teaching-Learning Process (General Instructions)</b>  These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.</p> <ol style="list-style-type: none"> <li>Lecturer method (L) does not mean only the traditional lecture method, but a different type of teaching method may be adopted to develop the outcomes.</li> <li>Show Video/animation films to explain concepts.</li> <li>Encourage collaborative (Group Learning) Learning in the class.</li> <li>Ask at least three HOTS (Higher-order Thinking) questions in the class, which promotes critical thinking.</li> <li>Adopt Problem Based Learning (PBL), which fosters students' Analytical skills, develops thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.</li> <li>Topics will be introduced in multiple representations.</li> <li>Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.</li> <li>Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.</li> </ol>			
<b>Module-1</b>			
<p><b>Interior Landscaping</b>  Definition, classification of plants, indoor plants and their functions, layout &amp; components, Floriculture- Commercial, ornamental, Selection of plants &amp; pest control.</p>			
<b>Module-2</b>			
<p><b>Physical Requirements of Plants</b>  Physical requirements of plants-light, temperature, water, planting medium, soil separator, weight of plants, acclimatization &amp; maintenance. Techniques to meet physical requirements.</p>			
<b>Module-3</b>			
<p><b>Interior Landscaping Elements &amp; Principles</b>  Various interior landscaping elements – water bodies- pools, fountains, cascades, Plants, rocks, artifacts, paving &amp; lighting, Design guidelines-plant texture &amp; colour, plant height, plant spacing.</p>			
<b>Module-4</b>			
<p><b>Roof and Deck Landscape</b>  Protection of the integrity of the roof and structure, provisions for drainage, lightweight planting medium, irrigation, selection of materials, water proofing, provision for utilities and maintenance.</p>			
<b>Module-5</b>			
<p><b>Exercise on Interior Landscape</b></p> <ul style="list-style-type: none"> <li>Atrium design</li> <li>Boutique design</li> <li>Terrace garden</li> </ul>			

### **Course outcome (Course Skill Set)**

At the end of the course, the student will be able to:

1. Understand the role of landscape design with respect to macro scale of sustainability and ecology as well as in the micro scale of shaping outdoor environments.
2. Knowledge about the elements of landscape design and their scope.
3. Be Sensitive towards evolution of different garden and landscape design across time and context.
4. Understand of landscape design with respect to site planning and different functional typologies of spaces.
5. Design landscape according to the region, climate location and other details.

### **Assessment Details (both CIE and SEE)**

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks(18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

#### **Continuous Internal Evaluation:**

- 50 CIE marks will be for the Design portfolio presentations/viva/ seminar/models. Split up marks will be decided by the internal examiner based on the projects.
- The first internals will be at the end of 40-50% coverage of the syllabus for 25 marks and the second internal evaluation will be after covering 85-90% of the syllabus for 25 marks.
- Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for 50 marks.
- The student must secure 50% of maximum marks- 20 marks to qualify in the CIE of the professional core course PCC.

#### **Semester-End Examination:**

- 50 SEE marks will be viva based assessed by internal examiner and external examiner appointed by the University. (Note: Examiners will be from academia as well as industry experts.)
- Evaluation patterns will be based on Design portfolio presentations/ seminars/models. Split up marks will be decided by internal & external examiners based on the projects.
- The student must secure a minimum of 35% of maximum marks- (18 marks out of 50 marks) to qualify in the SEE of the professional core course PCC.

### **Suggested Learning Resources:**

#### **Books**

1. Landscape Graphics: Plan, Section, and Perspective Drawing of Landscape Spaces by Grant Reid, Watson-Guption Publications. 2002
2. Time saver standards for landscape architecture. 2014
3. Planting design by Theodore D.Walker, VNR Publications New York.
4. Landscaping Principles and Practices by Jack E.Ingels, Delmar Publishers..

### **Web links and Video Lectures (e-Resources):**

- <https://www.houzz.com/>
- <https://greenroofs.org/>

### **Activity Based Learning (Suggested Activities in Class)/ Practical Based learning**

- Design Exercises with Landscaping Elements
- Contextual Landscape Planning
- Guest Lecture by experts
- Case studies

<b>PROJECT MANAGEMENT</b>		Semester	VI
Course Code	<b>22BID63</b>	CIE Marks	50
Teaching Hours/Week (L: T:P: S)	3 Hrs. (3:0:0:0)	SEE Marks	50
Total Hours of Pedagogy	45Hrs (15 Weeks)	Total Marks	100
Credits	03	Exam Hours	3 Hours
Examination type (SEE)	<b>Theory</b>		
<p><b>Course objectives:</b></p> <ul style="list-style-type: none"> <li>• To introduce diverse management techniques tailored for planning and executing construction projects effectively.</li> <li>• To foster comprehension of management systems aimed at achieving efficiency in terms of quality, time, and cost.</li> <li>• To develop the ability to understand network elements and conduct project completion analysis.</li> <li>• To acquire knowledge of various analysis methods to derive effective management procedures.</li> <li>• To calculate risks associated with delays, proposing corrective measures to overcome time lags in projects.</li> <li>• To update on project progress and exercise control over manpower management.</li> </ul>			
<p><b>Teaching-Learning Process (General Instructions)</b>  These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.</p> <ol style="list-style-type: none"> <li>1. Lecturer method (L) does not mean only the traditional lecture method, but a different type of teaching method may be adopted to develop the outcomes.</li> <li>2. Show Video/animation films to explain concepts.</li> <li>3. Encourage collaborative (Group Learning) Learning in the class.</li> <li>4. Ask at least three HOTS (Higher-order Thinking) questions in the class, which promotes critical thinking.</li> <li>5. Adopt Problem Based Learning (PBL), which fosters students' Analytical skills, develops thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.</li> <li>6. Topics will be introduced in multiple representations.</li> <li>7. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.</li> <li>8. Discuss how every concept can be applied to the real world – and when that's possible, it helps improve the students' understanding.</li> </ol>			
<b>Module-1</b>			
<p><b>Introduction</b>  Project planning and project scheduling and project controlling, Role of Decision in project management, Method of planning and programming, Human aspects of project management, work breakdown structure, Life cycle of a project, disadvantages of traditional management system.</p>			
<b>Module-2</b>			
<p><b>Elements of network</b>  Event, activity, dummy, network rules, graphical guidelines for network, numbering of events</p>			
<b>Module-3</b>			
<p><b>Critical path method and pert analysis</b>  CPM network analysis &amp; PERT time estimates, time computation &amp; network analysis</p>			
<b>Module-4</b>			
<p><b>Project time reduction and optimization</b>  Project cost, Indirect project cost, direct project cost, slope of the direct cost curve, total project cost and Optimum duration, contracting the network for cost optimization, steps in cost-time optimization.</p>			
<b>Module-5</b>			
<p><b>Project updating and allocation</b>  When to update? Data required for updating, steps in the process of updating.  Resource usage profile: Histogram, Resource smoothing and Resource leveling, Computer applications in project management.</p>			

### Course outcome (Course Skill Set)

At the end of the course, the student will be able to:

1. Apply project management techniques in achieving objectives of a project like client needs, quality, time & cost.
2. Understand principles of management, construction scheduling, scope definition and team roles.
3. Differentiate the management into time, labour materials mainly apart from other contingencies.
4. Allocate various job works to different vendors and vendors management.
5. Enable the smooth functioning of the project and to move towards completion in time.

### Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

#### Continuous Internal Evaluation:

- There are 25 marks for the CIE's Assignment component and 25 for the Internal Assessment Test component.
- Each test shall be conducted for 25 marks. The first test will be administered after 40-50% of the coverage of the syllabus, and the second test will be administered after 85-90% of the coverage of the syllabus. The average of the two tests shall be scaled down to 25 marks.
- Any two assignment methods mentioned in the 22OB2.4, if an assignment is project-based then only one assignment for the course shall be planned. The schedule for assignments shall be planned properly by the course teacher. The teacher should not conduct two assignments at the end of the semester if two assignments are planned. Each assignment shall be conducted for 25 marks. (If two assignments are conducted then the sum of the two assignments shall be scaled down to 25 marks)
- The final CIE marks of the course out of 50 will be the sum of the scale-down marks of tests and assignment/s marks.

**Internal Assessment Test question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.**

#### Semester-End Examination:

Theory SEE will be conducted by University as per the scheduled timetable, with common question papers for the course (**duration 03 hours**).

- The question paper will have ten questions. Each question is set for 20 marks.
- There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub-questions), **should have a mix of topics** under that module.
- The students have to answer 5 full questions (for 100 marks), selecting one full question from each module.
- Marks scored shall be proportionally reduced to 50 marks.

#### Suggested Learning Resources:

##### Books

1. Dr.B.C.Punmia et al. "Project planning and control with PERT and CPM", Laxmi Publications, New Delhi
2. S.P.Mukhopadhyay, "Project management for Architects' and civil Engineers", IIT, Kharagpur, 1974
3. Jerome D.Wiest and Ferdinand K.Levy, "A Management Guide to PERT/ CPM", prentice Hall of India Pub, Ltd., New Delhi, 1982
4. R.A. Burgess and G.White, "Building production and project Management", The construction press, London, 1979.
5. A Guide to Project Management Body of Knowledge; 5th ed. – An American national standard – ANSI/PMI 99

- 001-2004

6. Krishnamurthy K. G., Ravindra S. V., "Construction and Project management for Engineers, architects, planners and Builders", CBS Publishers
7. Relevant Codes and standards

**Web links and Video Lectures (e-Resources):**

- <https://www.smartsheet.com/sites/default/files/2023-11/IC-Gantt-Chart PERT CPM Compatibility-Matrix PDF.pdf?srsltid=AfmBOorMZxmKXzNSus7kdE7yWq6-DbWo2FhRBTVBGGqfjPw-cvhiBiv7>
- <https://www.smartsheet.com/content/critical-path-advantages-disadvantages?srsltid=AfmBOoqyhdSjvytKkhLVEiCluRBR3ajgpn07khUE-2KFXjyd35fIBMku>

**Activity Based Learning (Suggested Activities in Class)/ Practical Based learning.**

- Mock Project Planning and Scheduling
- Budget Management Simulation
- Role-Playing Client and Team Meetings

<b>ADVANCED PRESENTATION TECHNIQUES</b>		Semester	VI
Course Code	<b>22BID64</b>	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	2 Hrs. (0:1:1:0)	SEE Marks	50
Total Hours of Pedagogy	30 Hrs. (15 Weeks)	Total Marks	100
Credits	02	Exam Hours	-
Examination type (SEE)	<b>Term Work</b>		
<p><b>Course objectives:</b></p> <ul style="list-style-type: none"> <li>To equip participants with the skills and knowledge necessary to excel in presenting interior design concepts effectively, fostering successful communication with clients and stakeholders in the dynamic field of interior design.</li> </ul>			
<p><b>Teaching-Learning Process (General Instructions)</b>  These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.</p> <ol style="list-style-type: none"> <li>Lecturer method (L) does not mean only the traditional lecture method, but a different type of teaching method may be adopted to develop the outcomes.</li> <li>Show Video/animation films to explain concepts.</li> <li>Encourage collaborative (Group Learning) Learning in the class.</li> <li>Ask at least three HOTS (Higher-order Thinking) questions in the class, which promotes critical thinking.</li> <li>Adopt Problem Based Learning (PBL), which fosters students' Analytical skills, develops thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.</li> <li>Topics will be introduced in multiple representations.</li> <li>Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.</li> <li>Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.</li> </ol>			
<b>Module-1</b>			
<p><b>Visual storytelling and concept development</b></p> <ul style="list-style-type: none"> <li>Overview of advanced presentation techniques specific to interior design</li> <li>Importance of visual communication in design</li> <li>Understanding the client's perspective</li> <li>Crafting compelling design narratives</li> <li>Developing visual concepts that resonate</li> <li>Integrating storytelling into design presentations</li> </ul>			
<b>Module-2</b>			
<p><b>Advanced rendering techniques - walkthrough and animation</b></p> <ul style="list-style-type: none"> <li><b>Introduction to Blender</b>, Basic 3D Modeling Techniques in Blender, Materials and Textures in Blender, Lighting and Rendering in Blender</li> <li><b>Introduction to Foyr</b>: Overview of Foyr interface and features. Importing Blender models into Foyr. Applying materials, textures, and lighting in Foyr. Creating virtual walkthroughs and presentations</li> <li><b>Advanced Rendering and Presentation in Foyr</b>: Enhancing Foyr renderings with post-processing effects. Creating panoramic and 360-degree renderings. Exporting and sharing Foyr presentations. Compiling final presentation materials using Blender and Foyr renderings.</li> </ul>			
<b>Module-3</b>			
<p><b>Advanced presentation layouts</b></p> <ul style="list-style-type: none"> <li>Designing impactful mood boards</li> <li>Designing visually appealing presentation layouts</li> <li>Balancing text, imagery, and whitespace</li> <li>Creating cohesive and professional presentation documents</li> </ul>			
<b>Module-4</b>			

**Interactive and engaging presentations**

- Incorporating audience participation
- Utilizing technology for interactive presentations
- Gamification and other engagement strategies
- Techniques for engaging virtual audiences
- Overcoming challenges of online presentations
- Utilizing virtual platforms effectively

**Module-5****Final design presentation project**

- Participants will apply advanced presentation techniques to a final interior design project
- Peer and instructor critiques
- Reflection on personal growth and application of skills

**Course outcome (Course Skill Set)**

At the end of the course, the student will be able to:

1. Develop Advanced Visual Communication Skills
2. Create Engaging Design Narratives
3. Effectively Present Materials and Finishes
4. Design Impactful Mood Boards and Collateral
5. Stay Informed on Industry Trends.

**Assessment Details (both CIE and SEE)**

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

**Continuous Internal Evaluation:**

- 50 CIE marks will be for the Design portfolio presentations/viva/ seminar/models. Split up marks will be decided by the internal examiner based on the projects.
- The first internals will be at the end of 40-50% coverage of the syllabus for 25 marks and the second internal evaluation will be after covering 85-90% of the syllabus for 25 marks.
- Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for 50 marks.
- The student must secure 50% of maximum marks- 20 marks to qualify in the CIE of the professional core course PCC.

**Semester-End Examination:**

- 50 SEE marks will be Term Work assessed by internal examiner and external examiner appointed by the University. (Note: Examiners will be from academia as well as industry experts.)
- Evaluation patterns will be based on Design portfolio presentations/ seminars/models. Split up marks will be decided by internal & external examiners based on the projects.
- The student must secure a minimum of 35% of maximum marks- (18 marks out of 50 marks) to qualify in the SEE of the professional core course PCC.

**Suggested Learning Resources:****Books**

1. B. Tondreau, Visual Presentation for Interior Design, Fairchild Books, 2015.
2. Dobson, Presentation Skills for Design Students, Laurence King Publishing, 2010.
3. M. Mitton and L. Courtney, Interior Design Visual Presentation: A Guide to Graphics, Models, and Presentation Techniques, John Wiley & Sons, 2012.
4. D. K. Sussman, What's Your Story? Storytelling to Move Markets, Audiences, People, and Brands, Pearson FT



Press, 2013.

5. L. A. Zamora, Presentation Basics (ASTD Training Basics), Association for Talent Development, 2010.
6. M. Oppermann, Portfolio Design for Interiors. Bloomsbury Visual Arts, 2019.
7. Brito, A. Blender 3D: Architecture, Buildings, and Scenery : Create Photorealistic 3D Architectural Visualizations of Buildings, Interiors, and Environmental Scenery. India: Packt Pub. 2008.

**Web links and Video Lectures (e-Resources):**

- <https://www.pechakucha.com/>
- <https://www.twinmotion.com/>

**Activity Based Learning (Suggested Activities in Class)/ Practical Based learning.**

- Virtual Reality (VR) and 3D Visualization Practice
- Pecha Kucha Presentation
- Interactive Presentation Workshops

<b>RESEARCH AND DISSERTATION</b>		Semester	VI
Course Code	<b>22BID65</b>	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	2 Hrs. (1:0:0:1)	SEE Marks	50
Total Hours of Pedagogy	30 Hrs. (15 Weeks)	Total Marks	100
Credits	02	Exam Hours	-
Examination type (SEE)	<b>Viva Voce</b>		
<p><b>Course objectives:</b></p> <ul style="list-style-type: none"> <li>• Understand the basics of research and its importance in design disciplines.</li> <li>• Differentiate between qualitative and quantitative research methods.</li> <li>• Formulate meaningful research questions.</li> <li>• Understand data collection and analysis techniques</li> <li>• Gain proficiency in organizing a dissertation.</li> <li>• Develop skills in writing and presenting research findings effectively.</li> </ul>			
<p><b>Teaching-Learning Process (General Instructions)</b>  These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.</p> <ol style="list-style-type: none"> <li>1. The students need to do the assignments in the studios.</li> <li>2. Explore videos in various websites using animation of geometrical drawings.</li> <li>3. Case studies of various inventions which has made a difference and its analysis</li> </ol>			
<b>Module-1</b>			
<p><b>Introduction to Research</b></p> <ul style="list-style-type: none"> <li>• Definitions and purpose of research.</li> <li>• Types of research: Basic, applied, exploratory, descriptive, and experimental.</li> <li>• Research ethics and integrity.</li> <li>• Relevance of research in Interior Design.</li> </ul>			
<b>Module-2</b>			
<p><b>Literature Review and Research Questions</b></p> <ul style="list-style-type: none"> <li>• Importance of literature review in framing research context.</li> <li>• Techniques for identifying credible sources and synthesizing information.</li> <li>• Framing research questions and hypotheses.</li> </ul>			
<b>Module-3</b>			
<p><b>Research Methodology and Strategy</b></p> <ul style="list-style-type: none"> <li>• Methods: Surveys, interviews, observations, and case studies.</li> <li>• Tools for data collection (questionnaires, sketches, photographs).</li> <li>• Data analysis techniques and their application in design research.</li> </ul>			
<b>Module-4</b>			
<p><b>Structuring and Writing the Dissertation</b></p> <ul style="list-style-type: none"> <li>• Components of a dissertation: Introduction, literature review, methodology, findings, and conclusion.</li> <li>• Referencing and citation styles (e.g., APA, MLA, Chicago).</li> <li>• Visual representation of data: Charts, diagrams, and infographics.</li> </ul>			
<b>Module-5</b>			
<p><b>Presentation and Defense</b></p> <ul style="list-style-type: none"> <li>• Creating a compelling presentation.</li> <li>• Techniques for effective verbal and visual communication.</li> <li>• Mock defense sessions and handling Q&amp;A.</li> </ul>			

### Course outcome (Course Skill Set)

At the end of the course, the student will be able to:

1. To develop knowledge about how to systematically organize ideas for a particular research topic.
2. To identify different perspectives on a particular research topic.
3. To examine and analyse critically literature on a particular research topic.

### Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

#### Continuous Internal Evaluation:

- 50 CIE marks will be for the Design portfolio presentations/viva/ seminar/models. Split up marks will be decided by the internal examiner based on the projects.
- The first internals will be at the end of 40-50% coverage of the syllabus for 25 marks and the second internal evaluation will be after covering 85-90% of the syllabus for 25 marks.
- Scaled-down marks of the sum of two internals and other assessment methods will be CIE marks for 50 marks.
- The student must secure 50% of maximum marks- 20 marks to qualify in the CIE of the professional core course PCC.

#### Semester-End Examination:

- 50 SEE marks will be viva based assessed by internal examiner and external examiner appointed by the University. (Note: Examiners will be from academia as well as industry experts.)
- Evaluation patterns will be based on Design portfolio presentations/ seminars/models. Split up marks will be decided by internal & external examiners based on the projects.

The student must secure a minimum of 35% of maximum marks- (18 marks out of 50 marks) to qualify in the SEE of the professional core course PCC.

### Suggested Learning Resources:

#### Books

1. Reswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
2. Kumar, R. (2019). *Research methodology: A step-by-step guide for beginners* (5th ed.). SAGE Publications.
3. Groat, L., & Wang, D. (2013). *Architectural research methods* (2nd ed.). Wiley.
4. Blessing, L. T. M., & Chakrabarti, A. (2009). *DRM, a design research methodology*. Springer.
5. Bryman, A. (2016). *Social research methods* (5th ed.). Oxford University Press.
6. Bell, J., & Waters, S. (2018). *Doing your research project: A guide for first-time researchers* (7th ed.). Open University Press.
7. Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE Publications.
8. Swetnam, D., & Swetnam, R. (2009). *Writing your dissertation: The bestselling guide to planning, preparing, and presenting first-class work*. How To Books.
9. Zeisel, J. (2006). *Inquiry by design: Environment/behavior/neuroscience in architecture, interiors, landscape, and planning* (Revised ed.). W. W. Norton & Company.
10. Hart, C. (2018). *Doing a literature review: Releasing the research imagination* (2nd ed.). SAGE Publications.
11. Denscombe, M. (2021). *The good research guide: For small-scale social research projects* (7th ed.). Open University Press.

### Web links and Video Lectures (e-Resources):

- [https://www.researchgate.net/publication/270847637\\_Research\\_and\\_Methodology\\_for\\_Interior\\_Designers/fulltext/55e09f7e08ae2fac471c3b77/Research-and-Methodology-for-Interior-Designers.pdf](https://www.researchgate.net/publication/270847637_Research_and_Methodology_for_Interior_Designers/fulltext/55e09f7e08ae2fac471c3b77/Research-and-Methodology-for-Interior-Designers.pdf)

**Activity Based Learning (Suggested Activities in Class)/ Practical Based learning.**

- Case study analysis of design-related research projects.
- Group discussions on the ethical considerations in research
- Workshop on framing research questions
- Practical exercise on data collection through interviews and observations
- Drafting an abstract and introduction for a chosen topic.
- Peer review and feedback on structure and clarity of written word.

<b>SPECIFICATIONS, ESTIMATION &amp; COSTING OF INTERIORS</b>		Semester	VI
Course Code	<b>22BID66</b>	CIE Marks	100
Teaching Hours/Week (L:T:P: S)	3 Hrs. (2:0:1:0)	SEE Marks	-
Total Hours of Pedagogy	45 Hrs. (15 Weeks)	Total Marks	100
Credits	02	Exam Hours	--
Examination type (SEE)	--		
<p><b>Course objectives:</b></p> <ul style="list-style-type: none"> <li>To equip the students to prepare the Estimate in order to foresee the cost of the work</li> <li>To implement an interior design project &amp; also to monitor / control project cost.</li> <li>To be able to make specification of the materials used and hence regulate the cost to keep it in the budget specified by the client.</li> <li>To understand various finishes and its rates to be executed as per the budget and the designer's choice.</li> <li>To be able to provide a rough estimate and a detailed estimate as in need of the project.</li> <li>To be able to learn to control the cost and time with respect to the project.</li> </ul>			
<p><b>Teaching-Learning Process (General Instructions)</b>  These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.</p> <ol style="list-style-type: none"> <li>Lecturer method (L) does not mean only the traditional lecture method, but a different type of teaching method may be adopted to develop the outcomes.</li> <li>Show Video/animation films to explain concepts.</li> <li>Encourage collaborative (Group Learning) Learning in the class.</li> <li>Ask at least three HOTS (Higher-order Thinking) questions in the class, which promotes critical thinking.</li> <li>Adopt Problem Based Learning (PBL), which fosters students' Analytical skills, develops thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.</li> <li>Topics will be introduced in multiple representations.</li> <li>Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.</li> <li>Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.</li> </ol>			
<b>Module-1</b>			
<p><b>Introduction to estimation</b>  Estimation –definition, purpose, types of estimate, and procedure for estimating the cost of work in order to implement an interior design project or to make products related to interior design like furniture, Artifacts etc.</p>			
<b>Module-2</b>			
<p><b>Rate analysis &amp; estimation format</b>  Rate Analysis – definition, method of preparation, quantity &amp; labor estimate for wood work, steelwork, Aluminum work, glass &amp; its rate for different, thickness &amp; sections, finishing (enamel paint, duco paints, Melamine, DU coats, Hand polishing, veneering, and laminating) for walls &amp; ceilings.  Electrical &amp; plumbing products, wiring, ducting etc., and laying of tiles &amp; wall paneling in the estimate format of the project.</p>			
<b>Module-3</b>			
<p><b>Detailed estimate</b>  Detailed Estimate–data required factors to be considered, methodology of preparation, abstract of Estimate, contingencies, labor charges, bill of quantities, different methods of estimate for interior design works, methods of measurement of works</p>			
<b>Module-4</b>			
<p><b>Costing of fixtures &amp; fittings</b>  Cost of the following items : electrical fitting like , luminaries , fan , cables , switches , etc . , tiles in skirting &amp; dado , cement plaster , joinery in wood , steel &amp; aluminum , painting to walls – cement paint, oil paints, Distemper acrylic emulsion, enamel paint painting to joinery, varnishing, and French polishing plumbing.</p>			

Equipments like piping , shower panels , cubicles , tubs , Jacuzzis , taps , motors , fountains , false ceiling of Aluminum panels , steel & wooden frame work , thermocol etc .wall paneling of ceramic tiles & other tiles of materials suitable for the same, partitions made of materials like aluminum wood, steel etc

### Module-5

#### Introduction to specification

Specification – Definition, purpose, procedure for writing specification forth purpose of calling tenders, types of specification.

Specification for different item related to interior design project–woodwork for Furniture window frames & pelmets, partition set also of materials like steel aluminum glass of various kind. Wall paneling & false ceiling of materials like aluminum, steel, wood, electrical, plumbing, air-conditioning & firefighting equipment.

#### Course outcome (Course Skill Set)

At the end of the course, the student will be able to:

1. Understand and write specification for the construction projects
2. Estimate of building interiors with various quantities
3. Be updated about the latest materials available in the market ad to be able to substitute materials to attain cost goals.
4. Understand the various methods of estimation that can be made and to be able to use the same during the execution of the project.
5. Have the knowledge of the budget limits of the client and hence will be able to make suitable suggestions to the client.
6. Be able to alter the specification and to adjust the final cost though the changes

#### Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50) and for the SEE minimum passing mark is 35% of the maximum marks (18 out of 50 marks). The student is declared as a pass in the course if he/she secures a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

**The BSAE means the Building Science and Applied Engineering course.**

**Project-based/ Assignment based/Viva based, Blue books and models outcome. CIE marks for this component are 100 marks.**

#### CIE for the BSAE course

- Portfolio Assessment - 50 CIE marks will be for the Design portfolio presentations/viva/seminar/models. Split-up marks will be decided by the internal examiner based on the projects.
- The first internal (project base assignment) will be at the end of 40-50% coverage of the syllabus for 25 marks and the second internal (Project base assignment) will be after covering 85-90% of the syllabus for 25 marks.
- Scaled-down marks of the sum of two internals and Portfolio assessment methods will be CIE marks for 100 marks.
- The student has to secure 40% of maximum marks- 100 marks to qualify in the CIE of the professional core course BSAE.

#### Suggested Learning Resources:

##### Books

1. Roshan Namavati. Professional practice (estimation & valuation). Lakhani Book Depot.
2. Roshan Namavati. Architectural detailing in residential interiors. Lakhani Book Depot.
3. C. M. Pitrowski. Professional practice in interior design. Van Nostrand Reinhold.
4. Harry Siegel, CPA, & Alan Sige. A guide to business principle and practices for interior designers. Whitney Library of Design.

5. William R. Hall. Contract interior finishes. Whitney Library of Design.
6. William Rupp. Construction materials of interior design. Whitney Library of Design.
7. Theo Susan. The interior designers guide: to pricing, estimating, budgeting.

**Web links and Video Lectures (e-Resources):**

- <https://www.buildersjournal.com/>
- <https://www.archdaily.com/>
- <https://www.sevenmentor.com/estimation-in-interior-design>
- <https://tothesource.com/posts/in-depth-guide-to-creating-interior-design-spec-sheets>

**Activity Based Learning (Suggested Activities in Class)/ Practical Based learning.**

- Material Specification Reports
- Mock Tender Preparation

<b>ELECTIVE- IV</b>		Semester	VI
Course Code	<b>22BID67</b>	CIE Marks	100
Teaching Hours/Week (L:T:P: S)	2 Hrs. (2:0:0:0)	SEE Marks	-
Total Hours of Pedagogy	30 Hrs. (15 Weeks)	Total Marks	100
Credits	01	Exam Hours	-
Examination type (SEE)	--		

**Course objectives:**

- To gain experience in aspects of Interior Design not offered in the regular curriculum.
- To study areas of the curriculum in greater depth.
- To explore career opportunities in the allied fields.

**Teaching-Learning Process (General Instructions)**

These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only the traditional lecture method, but a different type of teaching method may be adopted to develop the outcomes.
2. Show Video/animation films to explain concepts.
3. Encourage collaborative (Group Learning) Learning in the class.
4. Ask at least three HOTS (Higher-order Thinking) questions in the class, which promotes critical thinking.
5. Adopt Problem Based Learning (PBL), which fosters students' Analytical skills, develops thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
6. Topics will be introduced in multiple representations.
7. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
8. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.

**Module-1**

**a. Product Design**

**OBJECTIVE:**

Knowledge about the various styles of furniture manufactured in various materials is vital to a Designer.

Understanding the methods and techniques involved in furniture and product design.

To understand the importance of a digital product and then to create a digital product.

The process involved in the design of a product to be understood.

To understand the detailing of the furniture and its feasibility for production

To understand mass production techniques and the production line formation of the same

**OUTLINE:**

**Introduction** - A brief introduction to Product Designing – Various elements – History of Product Design – Definition of Product Design, understanding of Product Design - Purpose of Product Design, Role of Product Designers.

**Human Factors** - Definition of human factors, Application of human factors data. Human activities, their nature and effects. Man-machine system and physical environment. Human performance and system reliability. Information input and processing. Human control systems. Applied anthropometry, Human response to Climate.

**Aspects of Product Design** - Visual, Auditory, Tactual, Olfactory human mechanisms, Physical space and arrangement. Visual display, process of seeing, visual discrimination, quantitative and qualitative visual display, Alphanumeric and related displays, Visual codes and symbols.

**Product Design** - Form, Colour, Symbols, User specific criteria, Material, Technology and recyclability,



Packaging. Multiple Utility oriented approach to Product Design.

**Design Exercises** - Design of Household elements, tools and devices – Spoon/Cutlery, Water bottles, Phone cases. Design of furniture – Chairs/Computer table, Desk Organizers, Kitchen racks, Vanity organizers, Cabinets etc. Design of Industrial Product – Consumer Electronics Buttons and Controls, Lighting fixtures, Watch Dial, Gear Wheels, Automobile Headlights etc. Element design for the differently abled people.

#### **REFERENCES**

1. Time Saver Standards for Interior Design 2001
2. Andrew Alpern, Handbook of Specialty Elements in Architecture, McGraw-Hill Co., USA.
3. Francis D.K.Ching, Interior Design Illustrated, VNR Publications, New York.
4. An invitation to Design, Helen Marie Evans. 2001

#### **b. Advanced Materials in Interior Design**

##### **OBJECTIVE:**

To gain a comprehensive understanding of advanced materials used in interior design.  
To investigate the role of advanced materials in sustainable interior design practices.  
To develop proficiency in material research, evaluation, and specification for interior design projects

##### **OUTLINE:**

##### **Introduction to Advanced Materials**

Overview of advanced materials in interior design, Trends in using advanced materials for aesthetics and functionality, Case studies of innovative interior designs using advanced materials

##### **Advanced Materials for Structure**

Engineered Wood Products, Fiber-Reinforced Polymers (FRP)

##### **Advanced Materials for Finishing**

High-Performance Surfaces: Advanced Glass Products, Bio-Based and Recycled Materials, Acoustic and Soundproofing Materials

##### **Smart and Functional Materials**

Smart Glass, Phase Change Materials (PCMs), Responsive Textiles and Fabrics, Digital Printed Surfaces

##### **Design Project**

Developing a comprehensive design proposal.

#### **REFERENCES :**

1. The Interior Design Handbook: Furnish, Decorate, and Style Your Space. Frida Ramstedt.
2. INTERIOR DESIGN MATERIALS AND SPECIFICATIONS: by Lisa Godsey
3. Basics Interior Architecture 05: Texture + Materials by Russell Gagg
4. Interior Surfaces and Materials by Christian Schittich
5. Materials for Interior Environments by Corky Binggeli

#### **c. Journalism & Digital media in Interior Design**

##### **OBJECTIVE:**

To help the student understand the principles and technology of photography.  
To enable the student to understand the applications of photographs in interior  
To enable students to learn and understand the methods for blogging and vlogging  
To build the ability in students to create a website and be able to host it as well.  
To enable students to be updated and also to bring the interest of technology into the work.  
To ensure the student understands the various aspects of composition, lighting , color and integration of all these aspects into one project.  
To understand and acquire knowledge in interior journalism, Documentation and analysis of works.

**OUTLINE:**

**Photography & Techniques** - Concept of color; concepts of lighting, distance, visual angle, frames; media; Types of camera, properties and priorities; Exposure, Aperture, Speed; Photographic films. Techniques of photography relevant to interior

**Journalism** - Analysis of recent historical and contemporary examples of written and journalistic criticism of interior, including selected writings by Indian and overseas critics; discursive techniques, analysis of major critical themes, thematic categories in interior writing over the past three centuries.

**Analysis of Works** - Works of Indian and international writers and critics will be presented and discussed. Seminars on Indian interior design writers, journalists and critics

**Field Program** - Exercise on integrating photography in interior journalism.

**Documenting and Reporting** - Preparation of documentaries and reports in any media such as Video, Still images, Reports, presentations etc., and present as a Seminar.

**REFERENCES :**

1. Dave Saunders, Professional Advertising Photography, Merchurst, London
2. Roger Hicks, Practical photography, Cassell, London
3. Julian Calder and John Garrett, The 35mm Photographer's Handbook, Pan Books, London
4. Julie Adair King, Digital Photography for Dummies, COMDEX, New Delhi.

**Course outcome (Course Skill Set)****Assessment Details (both CIE and SEE)****CIE for the Elective course**

- Portfolio Assessment - 50 CIE marks will be for the Design portfolio presentations/viva/ seminar/models. Split-up marks will be decided by the internal examiner based on the projects.
- The first internal (project base assignment) will be at the end of 40-50% coverage of the syllabus for 25 marks and the second internal (Project base assignment) will be after covering 85-90% of the syllabus for 25 marks.
- Scaled-down marks of the sum of two internals and Portfolio assessment methods will be CIE marks for 100 marks.
- The student has to secure 40% of maximum marks- 100 marks to qualify in the CIE of the professional core course PAEC.

**Suggested Learning Resources:****Books****Web links and Video Lectures (e-Resources):**

- <https://www.delve.com/insights/the-role-of-human-factors-in-product-design>
- <https://anu.edu.in/the-importance-of-considering-ergonomics-in-product-design/>
- <https://www.twi-global.com/technical-knowledge/faqs/what-is-materials-selection#:~:text=Materials%20selection%20involves%20choosing%20the,material%2C%20and%20the%20material's%20cost.>
- <https://www.emilyhartphoto.com/new-blog/2023/1/31/choosing-the-right-gear-for-interior-design-photography>

**Activity Based Learning (Suggested Activities in Class)/ Practical Based learning.**