

COURSE TITLE	INTERIOR AND EXTERIOR DESIGN
COURSE CODE	05BA0304
COURSE CREDITS	4

Objective:

- 1 Understand the fundamentals of 3D architectural visualization.
- 2 Learn to model accurate interior and exterior spaces using 3ds Max.
- 3 Apply realistic lighting, materials, and textures using Corona Renderer.
- 4 Develop a visual sense for space planning, composition, and photorealism.
- 5 Create professional-quality renders suitable for portfolios and client presentations.

Course Outcomes: After completion of this course, student will be able to:

- 1 Students will demonstrate proficiency in modeling spaces using 3ds Max.
- 2 Students will create realistic interior and exterior scenes with Corona Renderer.
- 3 Students will apply lighting and material techniques for photorealistic rendering.
- 4 Students will manage architectural visualization projects from concept to final render.
- 5 Students will compile portfolio-ready design visualizations suitable for industry use.

Pre-requisite of course:Basic knowledge of 3D modeling concepts.

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
0	4	0	0	0	0	50	50

Contents : Unit	Topics	Contact Hours
Total Hours		

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	Introduction to 3D Architectural Visualization Overview and industry applications, 3ds Max Interface – Viewports, tools, modifiers, and project setup, Modeling Interiors – Walls, floors, doors, windows, and ceilings, Modeling Furniture – Beds, tables, sofas using primitives and editable poly, Basic Corona Setup – Assigning Corona as the renderer, scene settings.	15

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
2	Modeling Exteriors Building facades, landscapes, and roads, Using CAD Imports – Working with architectural plans and blueprints, Material Creation – Corona Materials, reflectivity, bump, displacement, Lighting Interiors – Using Corona Sun, Sky, and Lights for natural and artificial lighting, Camera Setup – Framing and composing shots with Corona Camera.	15
3	Texturing and UV Mapping Applying seamless textures and unwrapping objects, Corona Lights – IES lights, LightMix, and lighting control for mood creation Realistic Rendering – Depth of field, bloom, glare, and tone mapping, Asset Libraries – Using 3D Warehouse, Cosmos, and Corona Scatter, Material Overrides – Test renders and clay renders.	15
4	Exterior Environment Design Vegetation, terrain, roads, and background integration, Rendering Settings – Denoising, interactive rendering, and render elements, Post-production Workflow – Render passes, exporting to Photoshop for final touches, Portfolio Presentation – Creating mood boards, layout, and final rendering sheets, Final Project – Full Interior + Exterior scene with materials, lighting, and camera shots.	15
Total Hours		60

Textbook :

- 1 Autodesk 3ds Max 2024 Fundamentals , ASCENT, Center for Technical Knowledge, 2023
- 2 Corona Renderer Official Documentation , Chaos Czech , Chaos Czech , 2022

References:

- 1 Interior Design Visual Presentation , Interior Design Visual Presentation , Maureen Mitton , Wiley, 2024
- 2 Digital Lighting and Rendering , Digital Lighting and Rendering , Jeremy Birn , New Riders, 2013

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking / Creative
10.00	15.00	25.00	25.00	25.00	0.00

Instructional Method:

- 1 Practical

Supplementary Resources:

- 1 <https://docs.chaos.com/category/corona-renderer>
- 2 <https://area.autodesk.com/3dsmax>