

# **Lumion Professional Visualization: From Modeling to Realistic Rendering & Animation**

## **Course Objectives**

The primary objective of this course is to equip learners with the skills required to create high-quality architectural visualizations using Lumion. By the end of the course, learners will:

- Understand the complete Lumion interface and workflow within BIM environments
- Learn to import and manage 3D models from software like Revit, SketchUp, and AutoCAD
- Develop skills in creating realistic landscapes, environments, and site contexts
- Apply advanced materials and textures using Lumion's material editor
- Master lighting techniques for both day and night renderings
- Create interior and exterior visualizations with professional standards
- Produce walkthrough animations and presentation-ready outputs

## **Target Audience**

This course is designed for:

- Architecture students and professionals
- Civil engineers and BIM professionals
- Interior designers and visualization artists
- Urban planners and landscape designers
- 3D modelers using Revit, SketchUp, Rhino, AutoCAD, etc.

## **Course Outcomes**

After completing this course, participants will be able to:

- Navigate and efficiently use Lumion tools and interface
- Import and optimize 3D models for real-time rendering
- Create realistic outdoor environments with terrain, vegetation, and weather effects
- Set up professional lighting for both exterior and interior scenes
- Generate high-quality day and night renders
- Develop interior visualization scenes with realistic detailing
- Create smooth walkthrough animations and video presentations

**Course Outline** - The course comprises **16-hours** of theory and labs and is divided into **8** different chapters. Each chapter will be followed by hands-on lab exercises to reinforce learning and gauge understanding of the topics covered.

## **Table of Contents: -**

### **Module 1: Introduction to Lumion**

- Overview of Lumion in BIM & Visualization Workflow
- System Requirements & Installation
- Understanding Lumion Interface
- Navigation Controls & Camera Movement
- Importing Models (Revit, SketchUp, AutoCAD, etc.)
- File Management & Project Setup

### **Module 2: Scene Building & Landscape Setup**

- Working with Terrain Tools
- Creating Landscapes (Grass, Water, Mountains)
- Placing Nature Elements (Trees, Plants, Rocks)
- Weather Settings (Sun, Sky, Clouds, Wind)
- Real-world Context Setup

### **Module 3: Components & Object Placement**

- Lumion Library Overview
- Object Placement Techniques
- Selection & Transformation Tools
- Mass Placement & Alignment
- Grouping & Layer Management
- Importing Custom Assets

### **Module 4: Materials & Texturing**

- Applying Standard Materials
- Advanced Material Settings
- PBR Materials (Reflection, Roughness, Normal Maps)

- Glass, Water & Emissive Materials
- Custom Texture Mapping
- Material Optimization Techniques

## **Module 5: Lighting & Effects – Day Scene**

- Natural Lighting Setup
- Sun & Sky Control
- Real Sky & HDRI Usage
- Shadows & Reflection Planes
- Effects Panel Overview
- Rendering a Day Scene

## **Module 6: Night Rendering & Artificial Lighting**

- Night Scene Setup
- Types of Lights (Omni, Spot, Area)
- Interior & Exterior Lighting Techniques
- Light Temperature & Intensity Control
- Emissive Materials for Lighting
- Rendering a Night Scene

## **Module 7: Interior Visualization**

- Interior Scene Setup
- Furniture & Asset Placement
- Interior Lighting Techniques
- Camera Composition for Interiors
- Applying Effects for Realism
- Rendering Interior Views

## **Module 8: Animation & Walkthrough**

- Introduction to Animation Modes
- Creating Camera Paths
- Keyframe Animation

- Adding Effects to Videos
- Walkthrough Creation
- Export Settings for Images & Videos