KOENIG SOLUTIONS · COURSE OUTLINE

Architecture Visual Render

10
MODULES

109
TOPICS

LEARNING OBJECTIVES

- Describe the principles and tools used in architectural visualization
- Build 3D models of buildings and other structures
- Apply lighting and texturing techniques such as HDRI and GI
- Implement rendering techniques to produce photorealistic images
- Develop architectural animations including camera and character motion
- Configure visualization software for rendering and post-production
- Optimize visualizations for virtual and augmented reality
- Create 3D environments for use in video games

COURSE SYLLABUS

10 Modules, 109 Topics

01

Introduction to Architectural Visualization

Module 1: Introduction to Architectural Visualization is an introductory course designed to provide students with the fundamental knowledge and skills needed to create stunning architectural visualizations. Through lectures, demonstrations, and hands-on exercises, students will learn the basics of 3D modeling, lighting, and rendering, as well as how to use industry-standard software to create photorealistic images. By the end of the course, students will have a strong foundation in architectural visualization and be able to create stunning visuals for their projects.

TOPICS

- Overview of Architectural Visualization
- Types of Architectural Visualization
- Principles of Architectural Visualization
- Tools and Software for Architectural Visualization
- Rendering Techniques for Architectural Visualization
- Lighting and Texturing for Architectural Visualization
- Post-Production Techniques for Architectural Visualization
- Best Practices for Architectural Visualization
- Troubleshooting Common Issues in Architectural Visualization
- Professional Workflows for Architectural Visualization

02

3D Modeling and Rendering

Module 2 of the Architecture Visual Render Course focuses on 3D Modeling and Rendering. Students will learn how to create 3D models of buildings and other structures, as well as how to render them in a realistic way. They will also learn how to use various software packages to create and render 3D models. This module will provide students with the skills and knowledge necessary to create stunning 3D visuals for their projects.

TOPICS

- Introduction to 3D Modeling
- Understanding 3D Modeling Software
- Modeling Techniques for Architectural Visualization
- Texturing and Lighting for Architectural Visualization
- Rendering Techniques for Architectural Visualization
- Post-Production Techniques for Architectural Visualization
- Advanced 3D Modeling Techniques
- Advanced Rendering Techniques
- Creating Animations with 3D Models
- Creating Interactive 3D Models

03

Lighting and Texturing

Module 3 of the Architecture Visual Render Course focuses on lighting and texturing techniques. Students will learn how to create realistic lighting and textures for their 3D models, as well as how to use different software tools to achieve the desired results. They will also learn how to use different lighting techniques to create a variety of moods and atmospheres.

TOPICS

- Introduction to Lighting and Texturing
- Understanding the Basics of Lighting
- Types of Lighting in Architectural Visualization
- Understanding the Basics of Texturing
- Types of Textures in Architectural Visualization
- Working with HDRI Images
- Working with Global Illumination
- Working with Ambient Occlusion
- Working with Reflection and Refraction
- Working with Displacement Maps
- Working with Normal Maps
- Working with Bump Maps
- Working with Alpha Maps
- Working with Transparency Maps
- Working with Specular Maps
- Working with Displacement Maps
- Working with Subsurface Scattering
- Working with Volumetric Lighting
- Working with Image-Based Lighting
- Working with Light Emitting Materials

04

Architectural Animation

Module 4: Architectural Animation is a module in an architecture visual render course that focuses on the use of animation to create realistic and engaging visuals for architectural projects. Students will learn how to create 3D models, animate them, and render them for use in presentations and other media. They will also explore the use of motion graphics, lighting, and other techniques to create stunning visuals.

TOPICS

- Introduction to Architectural Animation
- Principles of Animation
- Animation Software and Tools
- Character Animation
- Camera Animation
- Lighting and Rendering
- Post-Production Techniques
- Architectural Visualization
- Animation Workflows
- Animation for Virtual Reality

05

Architectural Visualization Software

Module 5: Architectural Visualization Software is a course designed to teach students how to use software to create realistic 3D renderings of architectural designs. Students will learn how to use a variety of tools and techniques to create stunning visuals that accurately represent the design intent. The course will cover topics such as lighting, materials, and post-production techniques. Students will also learn how to use the software to create animations and interactive presentations.

TOPICS

- Introduction to Architectural Visualization Software
- Exploring the Features of Popular Architectural Visualization Software
- Understanding the Basics of Rendering
- Working with Textures and Materials
- Creating Photorealistic Renderings
- Lighting and Post-Processing Techniques
- Animating Architectural Visualizations
- Integrating Architectural Visualizations into Presentations
- Troubleshooting Common Rendering Issues
- Advanced Rendering Techniques

06

Architectural Rendering Techniques

Module 6 of the Architecture Visual Render Course focuses on Architectural Rendering Techniques. This module covers topics such as the fundamentals of rendering, materials and lighting, and the use of software to create realistic renderings. Students will learn how to create photorealistic renderings of their designs, as well as how to use different techniques to create unique and interesting renderings.

TOPICS

- Introduction to Architectural Rendering
- Understanding Lighting and Shading
- Working with Textures and Materials
- Creating Photorealistic Renderings
- Working with Post-Production Techniques
- Exploring Advanced Rendering Techniques
- Creating Animations and Walkthroughs
- Working with 3D Modeling Software
- Understanding Global Illumination
- Exploring Virtual Reality Rendering

07

Architectural Visualization Workflows

Module 7 of the Architecture Visual Render Course focuses on Architectural Visualization Workflows. This module covers the fundamentals of creating a successful workflow for architectural visualization projects, including topics such as project planning, asset creation, lighting, and rendering. Students will learn how to create a streamlined workflow that will help them produce high-quality visuals in a timely manner.

TOPICS

- Introduction to Architectural Visualization
- Understanding the Basics of 3D Modeling
- Working with Textures and Materials
- Lighting and Rendering Techniques
- Post-Production and Compositing
- Creating Animations and Interactive Visualizations
- Working with Virtual Reality and Augmented Reality
- Troubleshooting Common Issues in Architectural Visualization
- Optimizing Workflows for Maximum Efficiency
- Exploring Advanced Techniques in Architectural Visualization

08

Architectural Visualization for Virtual Reality

Module 8: Architectural Visualization for Virtual Reality is a course designed to teach students how to create realistic 3D renderings of architectural designs for virtual reality applications. Students will learn how to use various software tools to create photorealistic renderings, as well as how to optimize their renderings for virtual reality applications. The course will also cover topics such as lighting, materials, and post-processing techniques.

TOPICS

- Introduction to Architectural Visualization for Virtual Reality
- Understanding the Basics of 3D Modeling for Virtual Reality
- Exploring the Benefits of Virtual Reality for Architecture
- Creating Realistic Textures and Materials for Virtual Reality
- Lighting and Rendering for Virtual Reality
- Optimizing Architectural Visualization for Virtual Reality
- Integrating Virtual Reality into Architectural Design
- Developing Interactive Experiences for Virtual Reality
- Exploring the Future of Virtual Reality in Architecture

09

Architectural Visualization for Augmented Reality

Module 9: Architectural Visualization for Augmented Reality is a course designed to teach students how to create realistic 3D models and renderings of architectural designs for use in augmented reality applications. Students will learn how to use various software tools to create photorealistic 3D models and renderings, as well as how to integrate them into augmented reality applications. The course will also cover topics such as lighting, materials, and textures, as well as how to optimize the models for use in augmented reality.

TOPICS

- Introduction to Augmented Reality in Architecture
- Overview of Architectural Visualization Tools
- Designing for Augmented Reality
- Creating 3D Models for Augmented Reality
- Rendering for Augmented Reality
- Lighting and Texturing for Augmented Reality
- Optimizing for Augmented Reality
- Integrating Augmented Reality into Architectural Visualization
- Best Practices for Augmented Reality in Architecture
- Troubleshooting Augmented Reality in Architecture

10

Architectural Visualization for Video Games

Module 10: Architectural Visualization for Video Games is a module designed to teach students how to create realistic 3D environments for video games. Students will learn how to use 3D modeling software to create detailed environments, as well as how to use lighting and texturing techniques to create a realistic look. They will also learn how to optimize their models for game engines and how to create cinematic sequences.

TOPICS

- Introduction to Architectural Visualization for Video Games
- Understanding the Basics of 3D Modeling for Video Games
- Lighting and Texturing for Video Games
- Rendering Techniques for Video Games
- Optimizing Architectural Visualization for Video Games
- Advanced Techniques for Architectural Visualization in Video Games
- Creating Realistic Environments for Video Games
- Integrating Architectural Visualization into Video Games
- Troubleshooting Architectural Visualization for Video Games
- Best Practices for Architectural Visualization in Video Games

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training | Live Online Classes (ILO) | Fly-Me-A-Trainer (FMAT) | Flexi (Self-Paced) | 1-on-1 Training

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

Visit koenig-solutions.com | info@koenig-solutions.com