معهد بريطانيا انترناشيونال أكاديمي للتدريب الأهلي
BRITAIN INTERNATIONAL ACADEMY
BIA CAMPUS

3DS MAX

Autodesk 3Ds Max

This Course Is Going To Help You To Gain The Skill Of Photorealistic 3D Visualization In 3Ds Max And V-Ray. You'll Learn All the Secrets of Photorealistic Rendering, Complex V-Ray Materials. If you're A Beginner In This Software, This Training Will Give You A Quick Start In The Profession. It Will Take You About One Month To Become Able To Make Professional Renders, Which Are Indistinguishable From Photos.

If You Already Work In 3Ds Max, In This Course You'll Learn Some Special Tricks With Lighting And Render Settings, Which Are Going To Improve The Quality Of Your Renders.

If You Still Don't Know, What You Are Going To Do, This Is A Good Chance To Become An Experienced 3D Artist. Today This Profession Is In Great Demand And The Market Of The Architectural 3D Visualization Needs Good Specialists.

Course Objective:

In The Field Of Architectural Visualization, Realism Is The First Goal That We Strive To Accomplish. This Course Is Designed For Architects And Interior Designers Who Want To Acquire 3D Computer Visualization Skills Using 3Ds Max, A State Of The Art Rapid Modeling And Visualization Tool. In This Course, Trainees Will Gain A Solid Introduction To Valuable Modeling, Lighting And Texture Mapping Techniques That Can Be Used To Achieve Realistic Architectural Renderings.

Course Outline

1. The Interface
   a. The Command Panel
   b. Zoom And Pan With The Wheel
   c. The View Cube
   d. The Zoom Panel
   e. Viewport Layouts
   f. Right-Click To Activate A View
   g. Viewport Shade Modes
   h. Perspective, Orthographic, Top, And Other Views
   i. Grids And Viewport Configuration
   j. Undo/Redo
   k. Preferences

2. Selection and Transformation Tools
   a. Selecting/Deselecting Multiple Objects
   b. Window/Crossing
   c. Selection Types
   d. Naming Objects
   e. Selecting By Name
   f. The Selection Filter
   g. The Move Tool

h. The Transform Gizmo
i. Absolute/Offset Transform Modes
j. Pivots
k. View And Local Coordinate Systems
l. Rotate And Scale
m. Select And Place
n. Moving Objects Along Local And View Axis
o. Object Snaps
p. Angle Snap
q. Percent Snap
r. Spinner Snap
s. Selection Sets

3. Mirroring, Aligning, Grouping, and Cloning Objects
   a. Mirroring Objects
   b. Aligning Positions
   c. Aligning Orientations
   d. Normal Align
   e. Grouping/Ungrouping
   f. Editing Groups: Open, Close, Attach, Detach, And Explode
   g. Scene Explorer
   h. Using Shift With Transformation Tools To Clone Objects
   i. Ctrl+V
   j. 2D Array
   k. The Quad Menu

4. Creating Precise Basic Architectural Objects
   a. Creating Simple Walls And Doors
   b. Aligning Doors With Walls
   c. Moving Doors Using Local Axis
   d. Creating Openings Using Boolean

5. Creating a Table and Chair Scene
   a. Units, Grids, And Snaps
   b. Modeling A Chair
   c. Monitoring Statistics
   d. Keeping Polygon Count Under Control
   e. Assigning Materials To The Chair Components
   f. Grouping The Chair
   g. Creating Three Additional Chairs
   h. Modeling A Table
   i. Assigning Materials To The Table
   j. Using The UVW To Correct Material Display
   k. Grouping The Table
   l. Placing The Chair In The Center
   m. Grouping The Table Set
   n. Using Plane To Create The Floor
   o. Assigning Checker Material To The Floor
   p. Creating the Walls Using C-Ext.
   q. Assigning Bricks Yellow Material To The Walls
   r. Using UVW Box Map To Correct The Wall Material
   s. Creating Roof And Assigning Material

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6. Introduction to Mesh Objects
   a. Primitive Objects
   b. Converting Primitives To Mesh Objects
   c. Modifying Mesh Objects: Vertex, Edge, Face, And Polygon
   d. Creating Stairs, Walls, Roofs, And Slabs Using Mesh Objects
   e. The Edit Mesh Modifier
   f. Mesh Smooth
   g. Building Stacks
   h. Collapsing Stacks
   i. Soft Selection
   j. Creating An Anchor
   k. Creating A Cane
   l. Using The FFD 4x4x4, The FFD 3x3x3, And The FFD 2x2x2 To Modify Objects

7. Modeling Using Mesh Objects
   a. Creating And Animating A Logo Using Text Shape, Extrude, And The FFD 4x4x4 Modifier
   b. Creating A Pool
   c. Rippling And Waving Water
   d. Slicing A Teapot
   e. Smoothing Groups

8. Poly Objects
   a. Difference Between Mesh Objects And Poly Objects
   b. Smoothing A Poly Object
   c. The Editpoly Modifier
   d. Creating A Light Pole
   e. Nurbs Modeling
   f. Using Rhino To Create Complex Curvy Objects

9. Shapes
   a. Shape Objects: Lines, Circles, Etc.
   b. Creating And Animating A 3D Helix.
   c. Editing Shape Objects: Vertex, Segment, Spline
   d. Interpolation
   e. Vertex Types: Bezier, Bezier Corner, Corner, Smooth
   f. Creating Internal Lines
   g. Attaching External Lines
   h. Editing Vertices: Break, Fuse, Weld, Refine, Insert, Make First, Connect, Cycle, Fillet, And Chamfer
   i. Editing Segments: Divide
   j. Editing Splines: Reverse, Outline, Boolean, Mirror, Copy, Trim, And Extend
   k. Attaching And Combining Shape Objects

10. Using Shapes to Create 3D Objects
   a. Creating A Flower
   b. Creating A Gear
   c. Linking Objects
   d. Creating A Cup
   e. Creating A Bottle
   f. Creating A Metal Rod
   g. Creating A Cornice
   h. Creating A Ramp

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11. Creating a Wrought Iron Dining Table
    a. Opening The Finished File
    b. Ungrouping
    c. Inspecting The Objects
    d. Creating A Similar Design

12. Importing 2D Plans from AutoCAD And Modeling in 3Ds Max
    a. Importing A 2D Plan From AutoCAD
    b. Pressing X To Search For The Tape Measure Command
    c. Using The Tape Tool To Measure Distances
    d. Using Shapes To Create The Side Wall And The Window
    e. Creating The Front Wall
    f. Importing And Attaching AutoCAD Polylines
    g. Creating The Roof
    h. Using AutoCAD Polylines And Other Techniques To Model A House In 3Ds Max.

13. Importing AutoCAD Polylines to Model A House in 3Ds Max
    a. Opening The File In AutoCAD
    b. Organizing Shapes Into Layers
    c. Using The Polyline Command To Create Shapes To Be Used In 3Ds Max
    d. Importing The AutoCAD File Layer By Layer
    e. Using Imported Polylines To Create Architectural Objects

14. Introduction to Animation
    a. Creating The Table And The Ball
    b. Configuring Time
    c. Animating The Bouncing Ball
    d. Using Key Frames To Control Speed
    e. The Motion Panel
    f. Animating The Table Rotation

15. Standard Lights
    a. Using Target Spotlights
    b. Spotlight Properties
    c. Free Spotlights
    d. Target Direct Lights
    e. Free Direct Lights
    f. Omni Lights
    g. Skylights

16. Introduction to Lighting, Cameras, and Animation
    a. Creating An Omni Light
    b. Activating Shadows
    c. Adding A Skylight
    d. Adding A Camera
    e. Using Multiple Viewports To Position The Camera
    f. Rendering Still Images
    g. Animating The Camera Movement
    h. Introduction To Key Frames
    i. Rendering The Animation
    j. Creating Avi Or Quick Time Movie Files

17. The Standard Lighting System
    a. Key Lights - Target Spot

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b. Fill Lights - Large Target Direct
c. Back Lights – Skylight

18. The Daylight System
    a. Creating A Daylight System
    b. Setting True North
    c. Location Data
    d. Date And Time Data
    e. Setting Exposure Control
    f. Logarithmic Exposure Control Parameters

19. Night View
    a. Adding Photometric Lights
    b. Using Light Templates
    c. Exposure Control

20. Standard Material
    a. The Material Editor
    b. Material Slots
    c. Shader Basic Parameters
    d. Blinn Basic Parameters
    e. Using Diffuse Maps
    f. Bitmap Properties
    g. Bump Maps
    h. Create Diffuse And Bump Bitmaps
    i. Creating Seamless Material
    j. Difference Between Get And Create New Material
    k. Material Library Stocks

21. UVW MAPS
    a. Planar
    b. Cylindrical
    c. Spherical
    d. Box
    e. Shrink Wrap

22. Rendering a Model Imported From AutoCAD
    a. Importing The MODEL From AutoCAD
    b. Assigning Wall Faces Ids
    c. Applying Multisub-Object Material To The Walls
    d. Applying UVW Material To The Walls
    e. Bitmap Map Channel
    f. Applying Material To Roof
    g. Unwrap UVW
    h. Applying Material To The Door
    i. Changing The Door's Pivot
    j. Applying Material To The Windows
    k. Force Two-Sided, Flip Normal, And 2-Sided Material
    l. Adding Ground, Trees, Sky, And A Camera
    m. Calculating Rendering Resolution Using The Print Size Assistant
    n. Rendering And Exporting To Adobe Photoshop

23. Rendering a Large House Imported from AutoCAD
    a. Importing The House From AutoCAD
    b. Assigning Wall Faces Ids
    c. Creating Multisub-Object Material

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d. Assigning Multisub-Object Material To The Walls
e. Applying UVW Material To Walls
f. UVW Bitmap Map Channel
g. Assigning Material To The Roof
h. Unwrap UVW
i. Detaching Stairs
j. Assigning Material With Flat Mirror Option
k. Assigning Material To The Pavement
l. Raytrace Reflections
m. Using Raytrace Material To Create Glass Material For Windows
n. Adding Trees And Cars
o. Configure User Paths
p. Using Populate To Simulate Walking People
q. Adding Lights And Shadows
r. Rendering Stills Using Many Cameras
s. Saving As Png And Using Photoshop To Replace The Background

24. Walkthroughs
a. Drawing The Camera Path
b. The Walkthrough Assistant
c. Time Configuration
d. Rendering The Animation
e. Lighting Settings
f. Main Principles Of Setting The Lights

25. V-Ray
a. V-Ray Sun+ V-Ray Sky
b. V-Ray Sun Settings
c. Day Lighting
d. Night Settings
e. Sunsets
f. Three Types Of Lights

26. Texturing
a. Rules Of Applying Textures
b. UVW Mapping
c. Texturing Concrete
d. Texturing Wood
e. Texturing Cloth
f. Materials Advanced
g. Principles Of Working With Materials
h. Finalizing Your Material Work
i. Tuning Materials
j. Fresnel Reflection
k. Ior
l. Blin
m. Ward
n. Mix
o. Fallof
p. Color Correction

27. Types of Materials
a. Blend Material
b. Multi/Sub Object
c. V-Ray Light Material
d. Creating Widely Used Materials

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e. Plaster
f. Concrete
g. Glass
h. Marble
i. Wood
j. Grass
k. V-Ray Displacement Mod
l. Dirty Glass
m. Old Wood
n. Parquetry
o. V-Ray Dirt
p. Old Plaster
q.

28. Advanced Cameras
    a. Main Principles Of Working With V-Ray Cameras
    b. Focal Length
    c. Custom Balance
    d. Shutter Speed
    e. Angles For Artistic Views
    f. Angles For Commercial Views
    g. Angles For Architectural Views

29. Render Settings
    a. Principles Of V-Ray
    b. Common Parameters
    c. Frame Buffer
    d. Global Switches
    e. Image Sample Antialiasing Filters
    f. V-Ray Environment
    g. Color Mapping
    h. Improving Global Lighting Performance
    i. Indirect Illumination
    j. Render Preset
    k. Batch Render
    l. Basic Photoshop Skills
    m. Filters
    n. Render Channels
    o. Render Id
    p. Reflection
    q. Mask
    r. Color Correction
    s. Contrast And Brightness
    t. Stretching Your Picture

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