Architecture Visualization Track
Using: Sketchup, Vray & Lumion

DESCRIPTION

SketchUp is a powerful free graphic modeling tool that Energy Logic has successfully adopted to streamline the from-plans rating take-off process for our clients. It has proven to be a strong tool when reviewing probationary ratings and performing quality assurance. This training is designed to familiarize you with SketchUp tool and provide you with practice designing a model using the tool. Then we will use the scripts developed by Energy Logic to generate a report designed for easy input into REM/Rate. Using SketchUp will improve your speed and accuracy in performing
take-offs.

Vray for SketchUp is Plug- in render engine for sketch, it converts the model into real photo by editing in (Materials – Lighting – Mapping) it takes paths to get your model rendered by trying and error.

- Covers the techniques of modeling and building skinning
- Covers the basic workflow of rendering simple scene with V-Ray for SketchUp.
- Covers ways to use a variety of V-Ray Lights for both day and night renders for an exterior scene.
- Discusses the Quality of materials in V-Ray for SketchUp.
- Covers the basics on using Sun and Sky Aerial Perspective in V-Ray for SketchUp.
- Covers the full Usage of Lumion in creating 3D scenes and animations.
- What is the best techniques for animations and post productions

OBJECTIVES

Enable trainees to do the following:
- Knows all the Requirements to create 3D modeling using Sketchup
- The students will be armed with the background and knowledge to apply Vary for
- Sketchup. Students will learn how to create, edit and modify Materials, lights and render
- The 3D shots by 5SRW system rendering module
- Learning how to rendering still Images and Animation using Lumion

PREREQUISITES

- Basic knowledge and skills about using AutoCAD or Revit
- Architecture Background would be recommended

+2 010000 50300
+2 010000 93429

Cairo: 2 Hassan Afify St., Makram Ebeid, Nasr City.
Alex: Mostafa kamel st., Smoha
Kuwait: Mubarak Al kabier., Sabah Al Salem.

www.cadmasters.org

Sketchup 3D Modeling – COURSE OUTLINE

- Sketchup user interface – Getting started
- Sketchup large toolset – essentials II – Modeling techniques
- Advanced techniques - Export from : 3D Max, Cad, Rhino and Revit
- Materials – Cameras – files bar – Draw - tools
- Large tool set + section plane +components + scenes + views+ exporting 2d and 3d
- Materials+ preferences +shadows + GEO LOCATION

Vray for Sketchup – COURSE OUTLINE

Understanding the Vray for Sketchup Environment and 5SRW

- Introduction to V-Ray for SketchUp
- The Ribbon and Application menu
- Introduction to V-Ray for SketchUp
- Vray framing system
- Using Templates and Parameters

Introduction to framing and Cameras

- Import and Export Format
- Create advanced Camera tools
- What is Physical Camera in vary
- The render output and Camera
- Aspect ratio and Focal Length
- Fix over exposures with V-Ray Frame Buffer

Lightings

- How V-Ray Light works
- How V-Ray IES works
- How to light with HDRIs
- How to light with Rectangle light
- Create a light balance for exteriors, using V-Ray Real Time (RT)
- How to create an interior light hierarchy mixing IES and VRay Lights
- How to use Sphere Light
- VRay Dome + VRay SKy

Materials

- Material Editor , Categories and Vray workspace
- Bump , Reflection , refraction and mapping
- Understand Color Mapping
- Texture editor and parameters.
- vray texture editor materials
- Create materials for Carpets and Curtains
- Use VRay Reflections
- Complex materials using reflection/Glossy maps
- VRayLight material, Wood and Pool material.

+2 010000 50300
+2 010000 93429

Cairo: 2 Hassan Afify St., Makram Ebeid, Nasr City.
Alex: Mostafa kamel st., Smoha
Kuwait: Mubarak Al kabier., Sabah Al Salem.

www.cadmasters.org

Final render
- How to use VRayLens controls to create Bloom & Glare
- Vray settings of render
- Presets and ambient occlusion
- Vray swarm system
- Use the Render Elements

Workshops
- Exterior workshop rendering trial
- Interior workshop rendering trial

Lumion – COURSE OUTLINE

Feature Highlights
- Styles Button
- Sky Light
- Soft and Fine Shadows
- Hyper light 2 indirect lighting in photo mode and video mode
- Pure Glass
- Speed ray Reflections
- Omni Shadow
- 3D Scanned people
- Physically based rendering
- Exchange of project files for team use
- Floating license (effectively same as network license)
- Background rendering mode
- Interface available in 19 languages
- Free online tutorials & support
- Access to on excellent user forum with a large community of architects and visualizers

Input
- 3D Model import: DWG, DXF, DAE, FBX, MAX, 3DS, OBJ, SKP (MAX file import requires a 3D Studio Max installation)
- Image import: TGA, DDS, PSD, JPG, BMP, HDR, PNG
- light map import: e.g. from Autodesk"' 3D Studio Max
- 2D background sound/music import (WAV)
- Video texture (MP4 video as texture)

Output
- Output to print resolution images:
- Max 7680 x 4320p
- Output to video (MP4)
- Max Ultra HD 2560 x 1440p
- Output video frame rates: fps/30fps/ 60fps/200fps
- Output lo image sequence: Max 3840 x 2160p
- Output to My lumion: images, movies and 360 Panoramas
- Output of depth maps, normal maps, lighting map, sky alpha map
- Output to real time fly through via lumion Viewer

+2 010000 50300
+2 010000 93429

Cairo: 2 Hassan Afify St., Makram Ebeid, Nasr City.
Alex: Mostafa kamel st., Smoha
Kuwait: Mubarak Al kabier., Sabah Al Salem.

www.cadmasters.org

Model Library

- Hundreds of plants, trees and vegetation
- HD cars, buses, bicycles, boats etc.
- Exterior objects: outdoor furniture, street furnishings, buildings etc.
- Interior objects: furniture, decorations, household fixtures and fittings etc.
- Animated 3 D people and children animated animals: dogs, cats, birds, farm animals, fish
- 3D people and animal silhouettes
- 2D people and animal silhouettes

Material Library

- 50+ terrain materials
- 8 customizable material types: water, glass, bill-board, light map etc.
- Over 800 stock materials

Environment & Weather

- 42 landscape textures, including realistic grass
- 20+ water types
- Customizable weather (cloud cover, sun position etc.)
- Ocean with waves slider, turbidity, color, etc.
- Waterfall material preset
- Custom terrain material sets
- Custom terrain texture import

Scene editor

- Easy 3D model import and placement
- Mass placement feature for, quickly creating large context
- Intuitive material editin9
- Landscape editing and rendering
- Advanced sky and cloud rendering
- 20 scene layers
- Open Street Map import (BETA)

Movie Editor

- Intuitive camera animation editor
- 4K video output
- Sun sky wind and environmental animations
- 3D out pot for side-by-side stereoscopic playback

Animation

- Mass movement controls
- Animation imports (move/rotate/scale animations via FBX riles)
- Advanced animation (curved animations, multiple key frames)
- Animated cross section
- Sky Drop effect

Movie and Photo Effects

Styles Button, Sky light, Hyper light, Global illumination, Sun Study, Volumetric Sunlight, 2-Point Perspective, Handheld Camera, Depth of Field, Tilt Shift, Fish Eye, Variation Control, Time Warp, Animated lights, Outlines, Oil Paint, Pastel Sketch, Watercolor, Cartoon, Blueprint, Color Correction, Bloom, Noise, Bleach, Vignette, Ana• log Color lab, Selective Saturation, and more.

+2 010000 50300
+2 010000 93429

Cairo: 2 Hassan Afify St., Makram Ebeid, Nasr City.
Alex: Mostafa kamel st., Smoha
Kuwait: Mubarak Al kabier., Sabah Al Salem.

www.cadmasters.org

Special effects (104 presets)

- Presets of falling leaves
- 48 Presets of fountains and 'water walls
- 16 Presets of fire effects
- 20 Presets of smoke effects
- 5 Presets of dust effects
- 6 Presets of fog effects
- 6 Presets of steam effects

Lumion invites clients to step inside your model and feel the spaces you designed. Within 15 minutes, you can sit down with Lumion and learn how to create videos, images and 360° panoramas. With customers in over 100 countries around the world, Lumion provides visualization solutions for architects, designers, engineers, BIM modellers and universities.

Architects and designers are communicating their designs with realistic buildings, materi-als, people and plants.

Landscape architects and urban planners quickly make large scale visualizations with hundreds of trees, vehicles and buildings.

University students studying architecture, design and engineering save time when rendering beautiful images and videos.

+2 010000 50300
+2 010000 93429

Cairo: 2 Hassan Afify St., Makram Ebeid, Nasr City.
Alex: Mostafa kamel st., Smoha
Kuwait: Mubarak Al kabier., Sabah Al Salem.

www.cadmasters.org