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OFFICIALTRAINER
V-Ray for Rhino V-Ray for SketchUp



V-Ray for Rhino & SketchUp Outline & Objectives



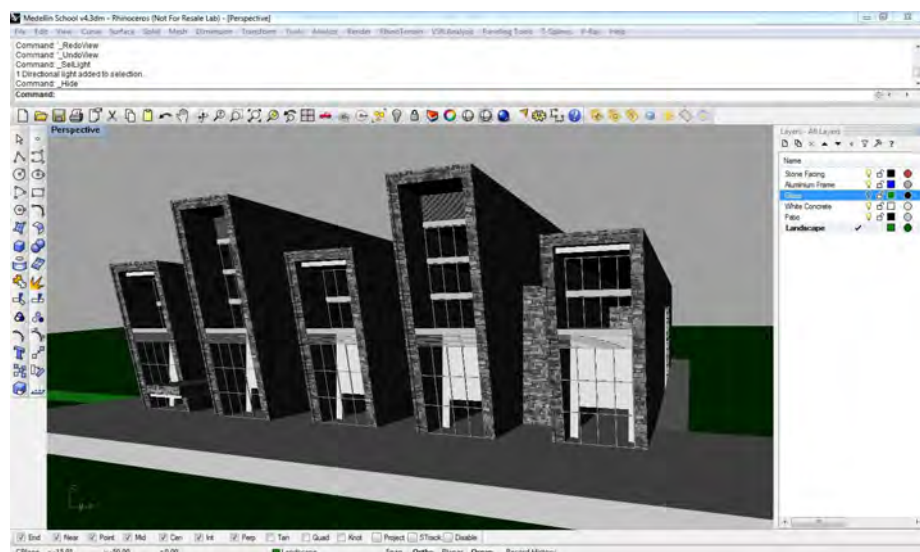
RhinoCeros
NURBS modeling for Windows

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The aim of this authorised two day V-Ray for Rhino and SketchUp course is to have users develop sufficient understanding of the core processes and elements of V-Ray to start using the product in their projects and to develop enough confidence to begin to experiment with lighting, materials and other settings.

The focus of day one is to produce visuals quickly in V-Ray by using some of the preset settings. The rendering process and suggested workflow will be discussed and the basic V-Ray tools introduced. An understanding of these basic tools in their own context is important in being able to use them during creating or manipulating a render.

The focus of day two is to begin bringing these basic tools together in a way that can be used on a day to day basis. Day two also allows users to work in their own way with the concepts that they have taken from day one. This allows the user to learn V-Ray on their terms, with the things that they think will be the most useful or helpful in their work.



Day 1

Part 1: **Getting to know V-Ray**

Aim: To have users begin to understand the UI and the components that make a V-Ray render.

The interface

Introduce the Toolbar, V-Ray Options, Material Editor and the V-Ray Frame Buffer. Examine the important differences between the V-Ray integration in Rhino and SketchUp.

Basic Rendering Concepts

Direct Illumination, Indirect Illumination and Global Illumination outlined.

The first render

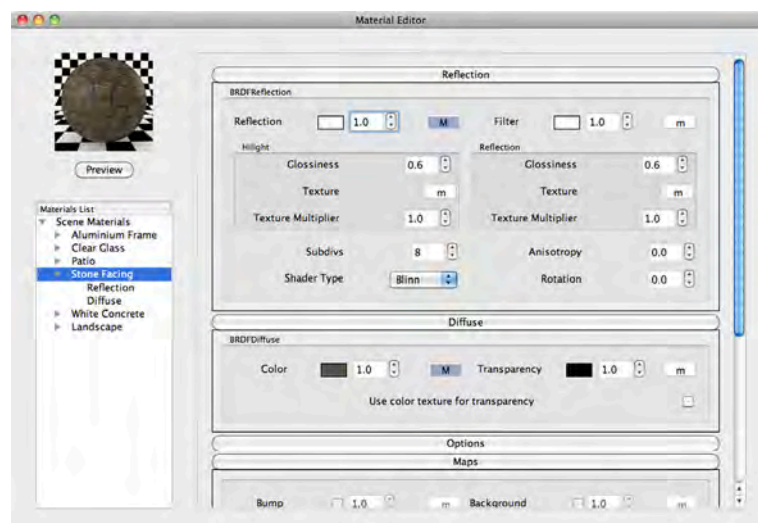
Introduce the render process. Overview of the rendering workflow and first V-Ray renders using preset settings. Understanding the basic elements of V-Ray and how it goes through a rendering, as well as introducing elements that will be discussed later on (e.g. Physical Camera, Sun-Sky, GI).

Illumination Explained

Understanding Direct Illumination and Primary & Secondary bounces of Indirect Illumination. What they are, the basics of how they are calculated, and which situations mean for each. This point will also introduce the different illumination engines used in V-Ray.

Materials

To get users familiar with the V-Ray material structure (Layers and layer transparency). How different parameters are set (i.e. Greyscale values instead of Numbers) as well as using different material elements.



Part 2 **Using Components**

Materials- The Diffuse Layer and the Texture Editor

Start working with the Diffuse layer, some of the general material properties (i.e. Bump), and the Texture Editor.

Materials - Understanding Reflection

Introduction to the reflection layer by using Fresnel, Filter colour, and Glossiness.

Illumination - GI and the Environment

Introducing the concept of the environment and how that fits into the illumination schemes explained previously.

Using HDR Images

Overview of HDR lighting, different mappings, and other important HDR information.



Basic Illumination Methods – Light Cache and DMC

Making basic speed/quality adjustments to LC and DMC.

Basic Illumination Methods – Irradiance Mapping

Getting basic understanding of Irradiance Mapping and to make speed/quality adjustments through min/max rates.

Part 3: The other Players

Aim: To gain an understanding of the two other major players in a V-Ray Rendering; the Physical camera and the V-Ray Sun/Sky system.

Understanding the concept of a Physical Camera

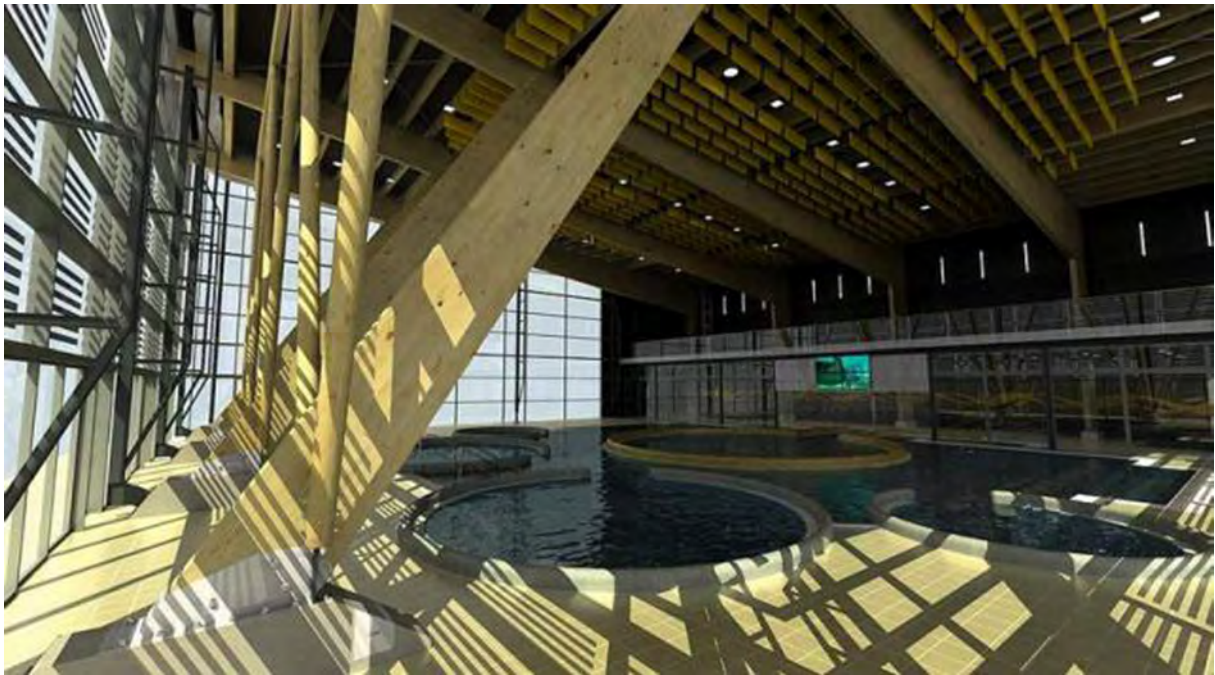
Introducing the idea of why a physical camera is fundamentally different from a typical camera used in rendering.

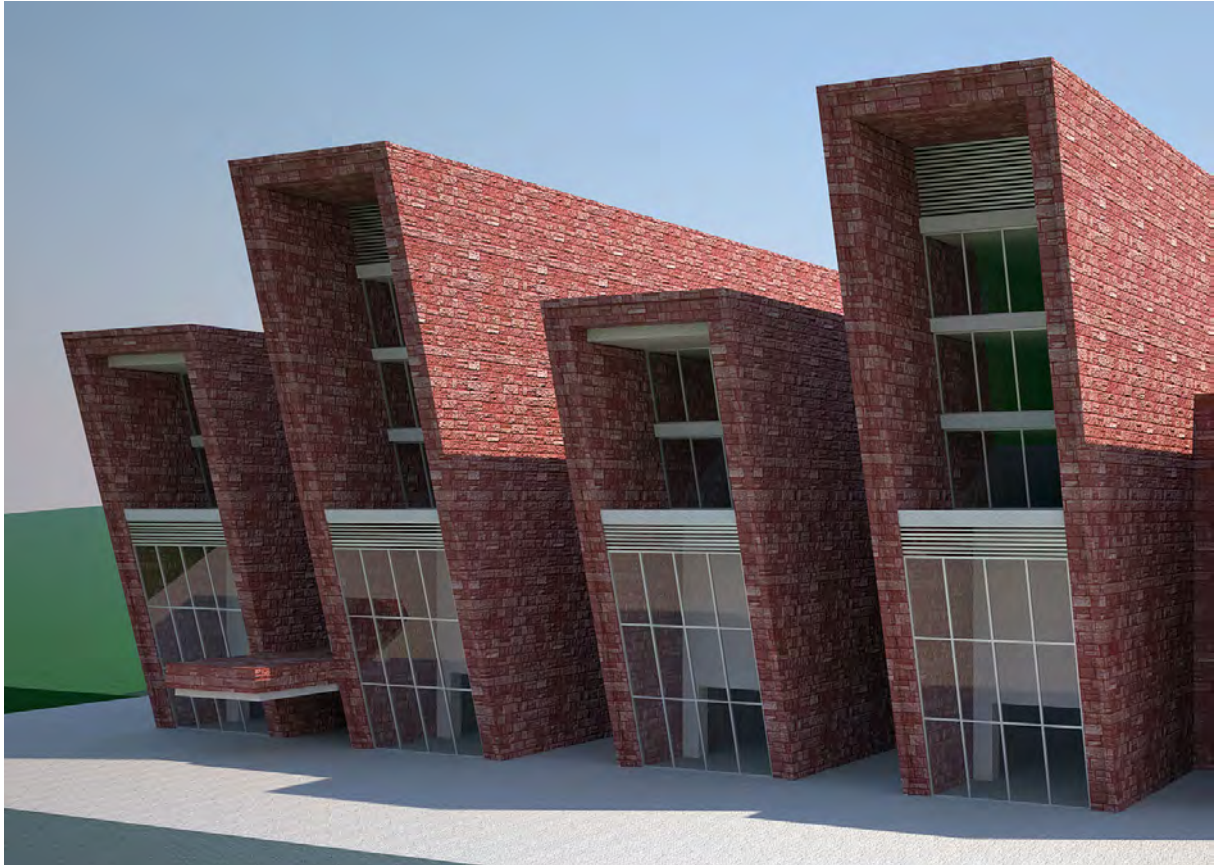
Adjusting Exposure

Adjusting the illumination levels through Shutter Speed, F-Stop, and ISO values.

The V-Ray Sun and Sky

To have users understand setting, using, and the implications of the V-Ray Sun and Sky system.





Day 2

Task: **Setting up an exterior rendering**

Aim: To have users take a simple model and do an exterior rendering.

Set Up Illumination

Set this up the illumination through the methods previously introduced; for example Pure Global Illumination, V-Ray Sun and Sky System, HDR etc.

Set Up Basic Materials

Set Up some basic materials for the scene

Speed/Quality Adjustments

To have users begin to understand how they can manipulate the quality and speed of the rendering.

Task: Creating an Advanced Material

Aim: To introduce creating materials that go beyond simple implementation of diffuse or reflection layers.

Refraction Layer

Introducing the concept of the refraction layer and re-emphasise transparency between layers.

Glossiness Explained

To have users understand what reflection and refraction glossiness is, how it is calculated, and how to adjust for quality/speed.

Multi-Layer Materials

Understanding how to work with multi-layer materials and how to use them effectively.

Glass and Jewellery

Tips for realistic Glass, Precious Metals and Gemstones.



Task: **Setting Up an Interior Rendering**

Aim: To have users create a basic setup for an interior scene



Lights in V-Ray

To introduce different light types and the basics of how to use them with V-Ray. The importance of the Rectangular Light in V-Ray. Manipulating the Rectangular Light in Rhino.

Initial Approach to Lighting

Identify which techniques will be used and some of the pre-configurations that can be made.

Creating Lighting

To have users take their approach and add the necessary lighting to achieve their desired effect.

Colour Bleed

Introducing a workflow to reduce colour bleed/colour cast when strong colours are used in small interior spaces.

Other Topics

Other areas covered during the course include:

Emmusive Materials

Rendering Water

Decals

Transparency Maps

Creating materials such as perforated steel, iron railings etc. without modelling.

Texture Mapping

Depth of Field with V-Ray Physical Camera

Depth of Field with Z-Depth Map

Post Processing in Photoshop

Attendees are encouraged to bring in their own model files for discussion on the second day.

