MENTORED VISUAL EFFECTS

Format	Distance Mentored Learning
Duration	38 Weeks With additional scheduled break weeks depending on when the course starts
Software	Maya, Photoshop, 3D Equalizer, Mudbox, Nuke

Introduction to Maya

Week 1 **Maya Fundamentals**
Using the Maya Interface
Understanding Projects and Scenes
Transform Tool Basics
Pivot Points
Grouping and Parenting
Modeling with Primitives

Week 2 **Curve Modeling and Procedural Texturing**
Curve Modeling and NURBS
Polygons and Component Mode
Image Planes
Construction History
Introduction to Texturing with Procedural Textures and Common Materials
The Renderview

Week 3 **Polygon Modeling and Texturing**
Understanding Polygon Modeling in Maya
Polygonal Components
Box Modeling
Shell Modeling
Texture Mapping
Creating and Editing UV's
Color, Bump and Specular Textures
Bump Mapping

Week 4 **Lighting and Rendering**
Introduction to 3 Point Lighting
Maya Spot Lights
Depth Map Shadows
Cameras
Batch Rendering an Animation
Viewing an Image Sequence

Escape Studios
2400 Broadway, Suite 210
Santa Monica, CA 90404
United States

Telephone
855-932-7324
Email
info@escapestudios.com
Web
www.escapestudios.com

Animation

Week 5 — **Animation Fundamentals**
- 12 Principles of Animation
- Key Framing
- Using the Graph Editor
- Animation Curves and Tangents

Week 6 — **Animation Tools**
- Non Linear Deformers
- Modeling with Animation Tools and Commands
- Motion Paths and Path Animation
- Applying and Animating Blendshapes
- Animating Pivot Points
- Connections and Expressions

Week 7 — **Constraints and Rigging**
- Introduction to Rigging
- Cameras and Composition
- Constraints
- Joints and IK
- Creating and Cycling an Animation
- Raytrace Shadows

NURBS Modeling

Week 8 — **NURBS Modeling**
- NURBS Curve and Surface Theory
- NURBS Modeling using Curves
- Modifying Curves
- Create and Modify Surfaces from Curves
- Projecting Curves
- Offsetting Surfaces

Week 9 — **NURBS Modeling Continued**
- Reinforcing Tools and Processes from Week 8
- Surface Editing Tools
- Trimming
- Working with Trim Edges
- Birail
- Tangency

Polygon Modeling and Skinning

Week 10 — **Polygon Modeling**
- Polygons a Stage Further
- Advanced Selection and Manipulation of Polygonal Components
- Deconstruction of Existing Organic Topology
- Understanding Edge Loops and Flow for Organised Meshes
- The Hotbox

Week 11 — **Hard Surface Modeling**
- Modeling in the Real World
- Hard Surface Modeling Techniques
- Subdivisional Modeling with a Smooth Proxy

Week 12 **UV Mapping**
Non-Organic UV Mapping
The UV Texture Editor
Unfolding and Relaxing
Quick Select Sets
Organic UV Mapping
Skinning

Texturing

Week 13 **Materials & Texture Mapping**
Introduction to Bump Mapping
Introduction to Transparency
Specularity and Reflections
Materials
Texture Mapping Material Attributes
Texture Resolution

Week 14 **Images and Photoshop Techniques**
Introduction to Images and Image Manipulation
Texturing 101
Introduction to Photoshop
Image Manipulation and Texture Creation
Creating and Tiling a Texture in Photoshop
Creating a Bump Map
Creating a Specular Map
Layered Shader

Week 15 **Projecting Textures**
Projections and 3D Textures
Projecting and Baking Textures
UV Snapshot Editing a Texture in Photoshop

Week 16 **Texture Distressing & Advanced Photoshop**
Texture Distressing Techniques in Photoshop
Layer Management in Photoshop
Texture Creation for Color, Bump, Reflection and Specular Attributes

Week 17 **Rendering, Lighting and Shadows**
Rendering in More Depth
Painting with Light
Introduction to Shadows
Light Decay & Light Fog
Fine Tuning Shadows
Gobos
Light Glow

Lighting and Rendering

Week 18 **Mental Ray and Raytracing**
Understanding Specular Surface Reflectance
Mental Ray
Anti Aliasing
Reflections
Reflection Blur
Refractions
Fresnel Effect
Depth of Field

Week 19 **Environmental Lighting**
Understanding Diffuse Surface Reflectance
IBL & HDRI
Introduction to Final Gather
Motion Blur for Mental Ray

Week 20 **Render Layers & Compositing in Photoshop**
Camera Mapping
HDRI and IBL
Render Layers
Compositing in Photoshop
Global Illumination
Caustics
Camera Tracking

Week 21 **Break Week**
Please note that there will be additional scheduled break weeks depending on when the course starts

Camera Tracking

Week 22 **The VFX Industry and Maya Live Fundamentals**
How Film Works
How Do Film Cameras Work
The First Moves
The Origins of TV
Camera Tracking
Introducing Maya Live / Matchmover
The User Interface
Image Sequences and Setting up Projects
Placing, Analysing and Modifying 2D Tracks
Evaluating Solutions and Improving Poor Solutions
Using the Solution

Week 23 **3D Equalizer**
Introduction
Tracking a Shot
Solving a Shot

Week 24 **3D Equalizer Continued**
Lens Distortion
Aligning the Camera

Mudbox Please note that this section of the course is currently in development

Week 25

Week 26

Week 27

Nuke and Render Layers

Week 28 **Compositing in Nuke**
Images and Image Formats
Images and Bit Depths
Logarithmic Formats - Cineon
Working in Floating Point
Color Pipeline and sRGB
Nuke Interface
Working with Nodes and Proxies
Lambertian Shader Model
Compositing a Character – Beginner, Intermediate and Advanced Levels
Multipass EXR Compositing

Week 29 **Render Layers in Maya**
Introduction
Diffuse Preset Maya Software Render
Direct Irradiance Preset for Mental Ray Render
Multi-Pass Render using Pass Sets
Per-Pass Parameters
Creating Render Layers
Common Preset Render Layers
Manual Setup of Render Layers
Advanced Custom Render Layers

Week 30 **Nuke Features and Camera Mapping**
Introduction to Roto - Static
Introduction to Roto - Animated
Introduction to Keying
Projecting in Maya
Projecting and 3D Compositing in Nuke

Advanced Shading

Week 31 **Shading Theory**
Lambertian Shader Model
Lambertian Shader Model in Maya
Shading Networks with File Textures
Assigning Materials
Reflections
Projections
Specular Shading
Layering Bump Maps
Layered Shaders
Introducing Utility Nodes to Control Material Attributes
Layered Texture

Week 32 **Procedural Textures, Displacements and Occlusion**
Light Fog
Mental Ray
Layered Texture
Occlusion
Maya Displacement
Shading Groups
Displacement in Occlusion
Mental Ray Depth of Field

Week 33 **Utility Nodes**
General Utilities
Color Utilities
Switch Utilities

Week 34 **Mental Ray Shaders**
Bump Maps and Reflections
Removing Specular Highlights
Shared Mental Ray Attributes
Reflection Occlusion
Custom Occlusion Layers
Mia Car Paint Phen x Passes
Mental Ray Materials and Textures
Mia Metallic Paint x Passes

Week 35 **MIA Material in Depth**
Mental Image Architectural material
Real World Materials
Advanced Shader Networks
Tone Mapping
Mental Ray Lens Shaders
Bokeh

Advanced Lighting

Week 36 **Lighting Theory and the Art of Lighting**
Color Theory
Camera Composition - Rules of Thumb
Camera Composition - Types of Shot
Camera Composition - Lines of Actions
Simulating Natural Light
Light Decay
Introduction to Shadows Theory
1,2,3,4 Point Lighting
Maya Lights and Light Linking
Artistic and Mood Lighting
Gobos and Cookies
Creative Use of Shadows

Week 37 **Simulating Daylight, Night and Artificial Lighting**
Naturalistic Lighting
Manual Lighting Set-Up
GI Joe
Mental Ray Sun and Sky
IBL and Fog
Decay
Light Shape
Mental Ray Area Lights

Week 38 **Linear Workflows for Environmental Lighting**
IBL and HDRI Theory
Camera Attributes
Simple Tone Mapping
Product Levels HDRIs
Final Gather and Depth of Field

Week 39 **Photographic Lighting**

Recreating Product Shot Lighting
Combining Real World and 3D Techniques
Maya Lights and Attributes

We take great care in ensuring that our courses stay up to date and relevant with what is happening in the industry. With the fast-paced development in industry we sometimes have to update the content of our courses at short notice, this breakdown is therefore subject to change at anytime.