

COURSE OUTLINES

MAYA

Pre-Requisite:

Knowledge of Autocad

Module I- Modeling with Maya

- The Maya Interface
 - The Interface
 - Working in View Panels
 - The main Maya Windows
 - Customizing the Interface
- Creating an Animation in Maya 7
 - Maya Project Structure
 - Creating and Editing Objects
 - Pivots and Placement
 - Maya Node Structure
 - Assigning Materials Using the Hypershade
 - Keyframe Animation
 - Basic Lighting
 - Rendering Frames
- Polygonal Modeling
 - What is a Polygon?
 - Polygonal Modeling Principles
 - Creating Machismo
 - Modeling Machismo's Body
- NURBS Modeling
 - Understanding NURBS
 - Modeling the MacGizmo
- Subdivision Surfaces
 - Understanding Subdivision Surfaces
 - Start with a Template
 - Modeling the Head
 - Details, Details and Subdivision Surfaces
- Advanced Modeling
 - About Blend Shapes
 - Assembling machismo
 - Off with His Head!
 - The Incredible (Edible) Blend Shape Machine

- Blend Shapes: Sneers, Blinks, and Smiles

Module II- Texturing and lighting with Maya

- Lighting for Animation
 - Understanding Lighting
 - Basic Lighting Work Flow
 - Types of Lights
 - Light Manipulator
 - Using Shadows
 - Light Effects
- Shading and Texturing for Animation
 - Understanding Maya Textures
 - The Hypershade
 - Building Simple Shading Networks
 - Shading the MacGhizmo
 - Shading Machismo: The UV Foundation
 - Creating Machismo's Texture
- Rendering Basics
 - Rendering an Object
 - Creating and Animating Cameras
 - Setting the Camera and Resolution
 - Adding Depth of Field
 - Adding Motion Blur
 - Using the Render Settings Window
 - Rendering with Maya Software
 - Hardware Render and Hardware Render Buffer
 - Vector Rendering
 - Working in the Render View Window
 - Layer Rendering, Compositing, and Editing
 - Ultimate Rendering Checklist
- Advanced Rendering with mental ray
 - Introduction to mental ray
 - Understanding Render Settings
 - Mental ray Custom Shaders
 - mental ray Lights, Shadows, and Fog
 - mental ray Motion Blur
 - Indirect illumination
 - Image- Based Lighting and HDRI
 - Surface Approximation and Displacement Maps

Module III- Character Animation with Maya

- Basic Animation
 - Animation Types
 - Keyframe Animation
 - Understanding Animation Work Flow
 - Hands On: Bouncing a Ball
 - Converting Cycled Animation to Curves
- Character Setup and Rigging
 - Deformer Types
 - Forward and Inverse Kinematics
 - Hands On: Creating a Skeleton
 - Creating a Full Body IK Skeleton
 - Binding and Weighing the Characters
- Character Animation
 - Step away from the Computer!
 - Reference Sources
 - The Animation process
 - Animating Joe Generic
 - Establishing Timings
 - Where Do We Start?
 - Refining Your Animation
- Nonlinear Animation
 - Working with Poses
 - Working with Clips
 - Hands On: Working with a Full Body IK Animation Rig