



**Course Title:** Maya – Essentials

**Duration:** 30 hours

**Autodesk Maya Objective:**

Autodesk Maya is one of the most popular 3D animation packages today. Maya is used by film and video artists, game developers, multimedia designers (both print and web), design visualization professionals, and 3D enthusiasts to create engaging, lifelike digital images, realistic animation, and extraordinary visual effects. This course will give the students the basic skills they need to model, texture, animate and render using Maya.

**Course Outline:**

**Maya Interface**

- Navigating the Viewport Menus
- Selecting objects, Using the Move-Rotate-Scale tools
- Understanding the channel editor and the attribute editor

**Polygonal Modeling Techniques**

- Working with polygonal components
- Working with Soft-Select
- Using the Extrude Tool
- Extruding along curves
- Smooth and Subdivision Surface
- Blocking out a character body

**Refining Polygonal Modeling**

- Working with Edge Loops
- Symmetrical Modeling Techniques
- Working with polygonal Booleans
- The lattice tool
- Modeling with non linear deformers
- Creating a 3d environment using polygons

**Nurbs Modeling Techniques**

- Nurbs Primitives
- Creating Bezier curves
- Manipulating Nurbs curves
- Using Nurbs loft
- Using Nurbs revolve
- Using Nurbs Planar

**Refining Nurbs Modeling**

- Changing text parameters
- Building text from scratch
- Text on a path
- Creating shapes
- Text roll and crawl
- Text effects
- Creating a bicycle using Nurbs



## **Organizing the Scenes**

- Using the Outliner
- Working with selection Masks
- Creating hierarchies
- Understanding the Hypergraph

## **Creating Materials**

- Understanding Materials
- Introduction to Renders
- Using the Ramp Shader
- Using the 3d paint tool

## **Applying Textures**

- Texture Mapping Polygons
- Applying UV mapping
- Using the UVW editor
- Texture Mapping Nurbs

## **Basic Deformation and Rigging**

- Creating Joints
- Deforming a mesh using the Skin Tool
- Creating IK handles
- Creating Blend Shapes
- Rigging Nonlinear Deformers

## **Animating in Maya**

- Using the Timeline
- Animating the Keyframes
- The Graph Editor
- Animating with constraints
- Creating animation Cycles
- Using Set Driven Key

## **Lighting in Maya**

- Lights, and light types
- Depth Map shadows
- Raytraced shadows
- Raytracing Reflections and Refractions

## **Rendering in Maya**

- Understand Renderers
- Introduction to Mental ray
- Interactive Rendering with IPR
- Batch Rendering