

AutoDesk Maya 2017

271 lessons : 16:17:18 (hh:mm:ss)

Description:

CADLearning for Autodesk® Maya® teaches the use of Maya, a 3D modeling, animation, and rendering software for professionals in the fields of entertainment and design. The content in this course has been devised so that users can quickly learn the basic functionality within Maya to create complex 3D content in the form of images and animation.

- **Getting Started**
 - Learning Objectives
 - Discovering the Maya Interface
 - Understanding Nodes and Attributes
 - Exploring the Interface
 - Navigating the UI
 - Using the Hotkey Editor
 - Using the Marking Menus
 - Accessing the Hotbox
 - Using the Transform Tools
 - Selecting Objects
 - Configuring the Interface
 - Setting Up the Grid and Units
 - Accessing the Help System
 - Downloading Autodesk Exchange Applications
 - Working with the Node Editor
 - Using the File Path Editor
- **Scene Management**
 - Exploring Scene and Project Management
 - Understanding Project Management
 - Setting the Project Location
 - Discovering Object Naming
 - Naming Objects in the Scene
 - Using the Outliner
 - Working with Layers
 - Creating Layers
 - Saving Scenes
 - Optimizing Your Scene with Pipeline Caching
 - Working with the GPU Cache File
 - Creating Assembly Definitions
 - Transferring Data Using A360
 - Improving Scene Performance with Profiling
 - Improving Performance with Evaluation Mode
- **Modeling**
 - Modeling in Maya
 - Understanding 2D Curves
 - Creating 2D Bezier Curves

- Editing 2D Bezier Curves
- Discovering 3D Surfaces
- Revolving a Surface
- Exploring NURBS Geometry
- Introducing 2D NURBS Curves
- Editing Curve CVs
- Extruding Along a Path
- Discovering NURBS Primitives
- Creating a NURBS Primitive Sphere
- Working with NURBS Object Components
- Projecting a Curve onto a Surface
- Creating a Bezel
- Editing NURBS
- Creating the Chamber Base
- Exploring 3D Polygon Objects
- Working with Polygon Mesh Components
- Understanding 3D Mesh Tools
- Building Using Primitives
- Duplicating and Editing Objects
- Using the Boolean Tool
- Sculpting Geometry
- Using the In-View Editor
- Understanding the Modeling Toolkit
- Exploring the Edit Mesh and Mesh Tools Menus
- Using Quad Draw to Create New Polygons
- Working with Symmetry
- Reducing the Polygon Count of a Model
- Creating a Polygon Cylinder
- Using the Multi-Cut Tool
- Modeling Objects Using Mesh Editing Tools and the Modeling Toolkit
- Projecting a Curve onto a Mesh
- Extruding Polygons Along a Curve
- Understanding How to Bevel Polygon Faces
- Understanding Subdivision Surfaces
- Modeling a Subdivision Storage Container
- Using Adaptive Subdivision with OpenSubdiv
- Sculpting Inside of Maya
- Exploring Deformers for Modeling
- Creating an Exhaust Tube
- Using Texture Deformers
- Using Shrinkwrap Deformers
- Understanding Object History
- Duplicating Objects
- Referencing Objects
- Importing an FBX File
- Creating Text with the 3D Type Tool
- Working with Scalable Vector Graphics Files in Maya

- **Materials**

- Defining Materials
- Exploring the Hypershade Material Editor
- Using the Physically Based Shader
- Creating Materials
- Understanding Shader Nodes
- Understanding Arnold Materials
- Editing Reflectivity
- Assigning a Material
- Creating a New Material
- Working with Map Patterns
- Adding Bump Mapping
- Incorporating Displacement Mapping
- Creating Transparent Materials
- Discovering Mapping
- Creating a Grid Texture Pattern
- Determining Map Size
- Creating UVs
- Utilizing Multiple Materials
- Assigning Multiple Materials
- Exploring Layered Shader and Mask Maps
- Working with the Layered Shader
- Incorporating Masking
- Understanding Substance Textures
- Working with Substance Textures
- Discovering Ptex Textures
- Understanding Material Libraries
- Exporting and Importing Material Shaders

- **Mapping**

- Discovering UV Mapping
- Examining Mapping Coordinates
- Editing UV Coordinates
- Understanding UV Tiling
- Working with Multiple Texture Maps
- Creating UV Sets
- Understanding the UV Editor
- Creating Symmetrical UVs

- **Cameras**

- Discovering the Importance of the Camera
- Examining Camera Shots
- Understanding Camera Distance
- Establishing Viewer Distance
- Discovering Depth of Field
- Adding Depth of Field to Control Focus
- Controlling Emotion Through the Camera Angle
- Adjusting Camera Angles
- Discovering Composition Essentials
- Understanding the Rule of Thirds

- Implementing the Rule of Thirds
- Discovering Diagonals
- Establishing Diagonals
- Examining Camera Types
- Identifying Camera Attributes
- Adding an Image Plane
- Sequencing Multiple Cameras
- Creating a Camera from the Current View
- Preparing the Camera for Final Render
- Locking the Camera Position
- **Lighting**
 - Understanding Direct and Indirect Light
 - Using the Light Editor
 - Discovering the Physical Sky
 - Creating a Physical Sky
 - Discovering Image-Based Lighting
 - Creating Image-Based Lighting
 - Identifying Light Types
 - Discovering Photometric Lights
 - Adding Lights
 - Enabling Area Lights
 - Understanding Indirect Lighting
 - Calculating Indirect Illumination
 - Using a Mesh Light
 - Understanding Global Illumination
 - Lighting for Interior Night
 - Isolating Object Lighting
 - Discovering Optical FX
 - Rendering Optical Effects
 - Understanding Shadow Types
- **Animation**
 - Introducing Animation Concepts
 - Discovering Keyframe Animation
 - Keyframing a Moving Object
 - Understanding Set Driven Keys
 - Opening the Door with Set Driven Keys
 - Exploring the Shape Editor
 - Discovering Path Animation
 - Animating on a Path
 - Controlling Velocity
 - Using the Graph Editor
 - Using the Time Editor
 - Modifying Editable Motion Trails
 - Discovering Camera Animation Basics
 - Separating Camera Position and Rotation Control
 - Animating a Locator on a Path
 - Linking a Hierarchy
 - Retiming an Animation

- Discovering the ATOM File Format
- Generating a Playblast Preview
- Working with Grease Pencil
- Assigning an Aim Constraint
- Using Cyclical Constraints in HumanIK
- Creating Motion Graphics with MASH
- **Rendering**
 - Discovering Rendering
 - Understanding Renderers in Maya
 - Rendering Still Images
 - Understanding Still Image Resolution
 - Setting Rendering Resolution for Stills
 - Working with Render Presets
 - Discovering Image File Types
 - Working with Still File Types
 - Rendering Animations
 - Understanding Image Resolution for Animations
 - Setting Animation Resolution
 - Understanding Animation File Types
 - Exploring How to Render Sequential Images
 - Converting Mental Ray Scenes to Arnold Scenes
 - Using FCheck
 - Working with IPR Rendering
 - Configuring AOVs in Arnold
 - Utilizing Viewport 2.0 Rendering
 - Applying ShaderFX
 - Exploring Color Management
 - Understanding Arnold Render Settings
- **IK and Rigging**
 - Introducing IK
 - Discovering IK Tools
 - Creating a Joint Chain
 - Rigging the Joint Chain
 - Understanding Skinning
 - Editing a Skinned Geometric Object
 - Defining a HumanIK Skeleton
 - Characterizing a HumanIK Skeleton
 - Understanding Geodesic Voxel Skinning
 - Rigging with the Quick Rig in Maya
 - Setting Up a Customized Quick Rig in Maya
 - Editing a Skinned Character with the Delta Mush Deformer
 - Correcting Deformations with the Pose Editor
- **MEL and Expressions**
 - Introducing MEL and Expressions
 - Understanding MEL Scripting
 - Executing a Script

- **Dynamics**

- Introducing Maya Dynamics
- Understanding Rigid Body Dynamics
- Creating a Simulation
- Running the Simulation
- Discovering Soft Body Dynamics
- Setting up a Soft Body Simulation
- Simulating a Beach Ball
- Using Maya Bullet Physics for Simulation
- Using Bullet Physics to Create Large-Scale Simulations
- Discovering Bifrost Simulation
- Simulating a Splash
- Using Guided Simulation in Bifrost
- Using Deep Adaptive Fluid Simulation in Bifrost
- Creating Waves with the Bifrost Ocean Simulation System
- Editing BOSS Solvers
- Discovering Bifrost Aero
- Creating Smoke with Bifrost Aero
- Discovering XGen
- Exploring the XGen Arbitrary Primitive Generator

- **Particles**

- Introducing Particles
- Creating a Particle Waterfall
- Setting Particle Attributes
- Editing a Collider Object
- Rendering Particles

- **nDynamics**

- Discovering nDynamics
- Introducing nParticles
- Creating Dripping Water
- Configuring nParticles
- Understanding nCloth
- Creating Hanging Curtains
- Simulating Hair with nHair
- Using Bend Model with nHair
- Simulating a Flag Waving in the Wind with nCloth

- **Fluid Effects**

- Discovering Fluid Effects
- Adding a 3D Fluid Container
- Editing the Flames
- Adjusting the Fire Source
- Creating a Liquid Simulation
- Configuring the Fluid Emitter
- Simulating Liquid Interaction
- Creating an Ocean Surface
- Floating an Object on an Ocean Surface

- **Hair and Fur**
 - Understanding Hair
 - Grooming Hair with XGen
- **Paint Effects**
 - Discovering Paint Effects
 - Using 2D Paint Effects
 - Creating 3D Paint Effects
 - Working with Surface Interaction
 - Working with Paint Effects Collisions
- **Compositing**
 - Understanding Compositing
 - Introducing Autodesk Composite
 - Compositing Multiple Layers
 - Remapping Color Output
- **Interoperability**
 - Importing and Exporting FBX Files
 - Using the Game Exporter and Sending Files to Unity
 - Incorporating Alembic Cache Files