Course Outline

Advanced Maya

Course Summary

Description

Autodesk Maya provides a thorough introduction to Autodesk Maya's modeling, texturing, lighting, and rendering capabilities. The courseware has been created to help new users make the most of this sophisticated application and to broaden the horizons of existing, self-taught users. The material covered in the courseware is designed specifically for professional designers who make up the majority of Autodesk Maya users and includes tutorials designed for professional designers in the game development, architectural, industrial/product design, and interior design industries.

Objectives

At the end of this course, students will understand:

- User interface
- New project creation
- Polygon modeling
- NURBS modeling
- Lighting, materials, and shading
- Texture
- Rendering

Topics

- Planning, Workflows, and Hard Surface Modeling
- Organic Modeling, Textures, and Architectural Projects
- Advanced Texturing, Advanced UV Unwrapping, and Lighting
- Advanced Animation Techniques, Rigging for Animation, MEL, Dynamics Simulations
- Batch Rendering, Compositing, and Final Output

Audience

Those who can benefit from this Advanced Maya course include professionals who want unparalleled creative freedom, productivity, and precision for producing superb 3D modeling.

Prerequisites

- Knowledge of OS X and basic computer navigation
- Experience with 3D modeling is recommended
- Introduction to Autodesk Maya class or equivalent experience

Duration

Four days

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I. Planning, Workflows, and Hard Surface Modeling

A. Discussion of real time and cinematic rendering workflows and related planning and resources required
B. Review of the Autodesk Maya interface and toolsets required for advanced modeling
C. Hard Surface Modeling techniques for real time and cinematic playback applications
D. Complex hard surface models using low and high polly strategies

II. Organic Modeling, Textures, and Architectural Projects

A. Organic modeling of the human form, animals, and custom characters using high and low polly strategies
B. Organic modeling of soft goods, cloth, and furniture items using Maya's nCloth and nDynamics
C. UV unwrapping strategies for hard surface and organic models
D. Class project: building an interior space as a team for real time and cinematic rendering applications

III. Advanced Texturing, Advanced UV Unwrapping, and Lighting

A. UV Unwrapping workflows and strategies for real time and cinematic rendering
B. Using Multiple UV sets
C. Texturing using accessory programs discussion and an introduction to Autodesk Mudbox
D. Advances lighting models for products, interior, and exterior spaces including Global illumination, Image Based Lighting, and Ambient Occlusion
E. Advanced mental Rap rendering engine tips and techniques (Maya 2016 and prior uses)
F. Using the Arnold rendering engine (Maya 2017 and later)

IV. Advanced Animation Techniques, Rigging for Animation, MEL, Dynamics Simulations

A. Animation Fundamentals review, using Voice Over for Lip-sync and reference video for timing and performances
B. Prop Rigging for animation
C. Character Rigging, Character Setup, and Character Animation
D. An introduction to the MEL programming language
E. Using Maya's Dynamic Simulations to create realistic animations

V. Batch Rendering, Compositing, and Final Output

A. Using playlists and VO recordings to create a Leica Reel or animated storyboard
B. Render Setup, Render Farms, 3rd party rendering services, and a discussion of aal the Maya compatible render engines
C. Compositing strategies using Photoshop After Effects, Nuke, or Autodesk Composite
D. Final Grading and Output of shots for Editing and final Sound Design
E. Making Sure VO playback is synchronized with our animation

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