AUTODESK ANIMATION

e-Learning Course

ZETLAN TECHNOLOGIES

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Introduction to Autodesk Animation Software

- Overview of Autodesk animation tools (Maya, 3ds Max, MotionBuilder)
- User interface and navigation
- Basic settings and preferences
- Understanding the workspace, viewports, and panels

3D Modeling for Animation

- Creating and manipulating 3D objects
- Polygon modeling techniques
- NURBS and subdivision surfaces
- Hard surface vs. organic modeling
- Character and environment modeling basics

Texturing and Shading

- Introduction to materials and shaders
- Applying textures using UV mapping
- Procedural vs. bitmap textures
- Substance and Arnold shader integration
- Creating realistic surfaces and effects

Rigging and Character Setup

- Introduction to rigging & Joint and skeleton creation
- Forward kinematics (FK) vs. inverse kinematics (IK)
- Skinning and weight painting
- Facial rigging and blend shapes
- Controllers and constraints

COURSE MODULES

5. Animation Principles and Techniques

- 12 Principles of Animation (Squash & Stretch, Anticipation, etc.)
- Keyframing and timeline basics
- Graph Editor and animation curves
- Motion paths and secondary motion
- Animating objects, characters, and cameras

6. Advanced Character Animation

- Walk cycles and run cycles & Lip-sync and facial animation
- Body mechanics and acting animation
- Creature and quadruped animation
- Motion capture workflow and cleanup

7. Dynamics and Visual Effects (VFX)

- Introduction to physics-based animation
- Particle systems and fluid simulation
- Cloth, hair, and fur dynamics
- Destruction and rigid body dynamics
- Fire, smoke, and explosion effects

8. Lighting and Rendering

- Basics of lighting in Maya/3ds Max
- Three-point lighting setup
- Rendering with Arnold, V-Ray, or Redshift
- Ray tracing and ambient occlusion
- Compositing basics and render passes

9. Motion Capture and Animation Editing

- Introduction to MotionBuilder
- Capturing and cleaning up motion data
- Retargeting animation to different characters
- Blending and layering animations
- Real-time animation workflows