



# **PROFESSIONAL CERTIFICATE IN ANIMATION AND MULTIMEDIA**

**DURATION: 360 Hours**

**TOTAL CREDITS: 12**

## **COURSE SYLLABUS**

# Objective

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Professional Certificate in animation and Multimedia program offers a well-rounded education that blends creative and technical skills essential for animation production. Students will build a solid foundation in both traditional and digital animation while deepening their understanding of the medium's historical roots. The program features a complementary set of courses aimed at developing key competencies and providing opportunities to refine skills within a collaborative production environment.

## Exit Profile

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- VFX Specialization
- 2D Animation
- 3D Modeling & Animation
- Graphic Designing
- Editing

## Career Path

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- VFX Artist & Editor
- 2D Animator
- 3D Modeler & Animator
- Graphic Designer

## Course Outline

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Course Name:	Professional Certificate in Animation and Multimedia	Duration:	360 H
Module	Topic	Duration	Total Duration
Module-I	Adobe Photoshop	20H	90H
	Adobe InDesign	20H	
	Adobe Illustrator	20H	
	CoralDraw	20H	
	Adobe Lightroom	10H	
Module-2	Theory	8	130H
	Concept of Animation	8	
	Animation Movie Making	8	
	Principles of Animation	8	
	Introduction to Digital Animation	8	
	Pre-Production	8	
	Production	8	
	Post-Production	8	
	Adobe Animate	10	
	Adobe Character Animator	10	
	Autodesk 3DS Max	12	
	Blender	12	
	Nuke	12	
	Adobe After Effects	10	
Module-3	Adobe Premier pro	25H	50H
	Adobe Audition	25H	
Module-4	Multimedia Final Project	90H	90H

# Course In Detail

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## MODULE - 1

### ADOBE PHOTOSHOP

- Introduction to Photoshop
- Understanding Workspace
- Creating a New Image
- Understanding Resolution and Pixels
- Understanding Color Modes
- Importance of CMYK in Printing
- Viewing of Image
- Zooming and Scrolling Images
- Print Size and Actual Pixels
- Different types of Screen Modes
- Working with Rulers and Guides
- Opening Images
- Working with Adobe Bridge
- Compositing Images
- Working with Selections
- Tools
- Color Range
- Adding Subtracting, Intersecting Selections
- Modifying Selections
- Transforming Selections
- Moving Selected Pixels using Move tool
- Concept of Layers
- Transforming Layers
- Arranging Layers
- Setting Transparency of Layers
- Selecting Multiple Layers
- Locking and Hiding Layers
- Creating a Blank Layer
- Deleting Layers

- Saving Images
- Different Types of File Format – PSD, JPEG, PNG, TIFF, GIF
- Cropping an Image
- Painting in Photoshop
- Using Color/Swatch Palettes, Color Picker and Eyedropper
- Brush, Pencil, Erasers, Pattern Stamp
- Setting Transparency for Painting Tools
- Creating Brushes and Patterns (By Defining Pattern and by Pattern Maker)
- Working with Libraries
- Adjusting brush's properties with Brush Palette
- Changing the color images by using Color Replacing Tool
- Filling Color
- Solid Color
- Working with Gradient
- Gradient Library
- Creating and Editing Gradient
- Transparency
- Retouching in Photoshop
- Working with Clone Stamp, Healing Brush, Spot Healing Brush, Patch Tool
- Removing Red Eye from an Image
- Color Correcting tools
- Blurring, Sharpening and Smudging an Image
- Using Smudge tool as a Painting tool
- Working with History Brush and History Palette
- History Brush and Art History
- Setting Source for History Brush
- Creating new Snapshots
- Adding Text
- Differences between Type Tools and Type Mask Tools
- About Point Text and Paragraph Text
- Formatting Text and Paragraph
- Creating Warped Text
- Working with Vector Shapes
- Differentiating Vector and Raster Objects
- Using Shape Tools
- Creating User Defined Vector Objects Using Pen Tool
- Parts of a Vector Object
- Anchor Point
- Path
- Bezier Curve
- Working with Path Palette

- Converting and Text into Path
- Applying Styles to Layers
- Using Style Presets
- Creating and Saving New Styles
- Creating Layer Groups
- Applying Effects to Images
- Blurring, Sharpening Images
- Reducing Noise
- Distorting Images
- Artistic and Painting Effects
- Understanding Other Filters
- Working with additional Plug-ins
- Adjusting the Color Tone of the Image
- Changing the Mode of Image
- Understanding the terms Shadows, Highlight, Midtones, Hue, Saturation, Exposure, Histograms
- Working with Adjustment Layers
- Working with Masking
- Editing in Quick Mask Mode
- Understanding Layer Mask and Vector Mask
- Understanding Clipping Mask and Clipping Path
- Working with Channels
- Resizing and Rotating Images
- Changing Images Size, Canvas Size
- Understanding Re sampling
- Automating Tasks with Actions and Batch
- Other Automation Tasks
- Creating Contact Sheet
- Creating Panorama with Photo merge
- Creating a Web Photo Gallery
- Scanning Images
- Creating Registration Marks and Crop Marks
- Fine Tuning Photoshop Using Preferences
- Understanding Scratch Disk

### **ASSIGNMENTS FOR PHOTOSHOP**

- Restoring Images
- Visiting Card
- ID Cards
- Brochures
- Ads / Flyers

- Magazine Covers
- Certificates
- Hoardings
- Setting double side / Folding Works

## **ADOBE ILLUSTRATOR**

- Introduction to Illustrator
- Importance of Vector Arts in Digital Imaging
- Understanding Workspace
- Creating New Artworks
- Viewing the Art Board
- Zooming and Panning
- Working with Navigator
- Screen Modes
- Working with Rulers and Guides
- Creating Objects
- By Dragging and By Numeric Entry
- Applying Color
- Fill and Stroke
- Color & Swatches Palettes
- Filling Color with Live Paint
- Selecting & Transforming Objects
- Saving and Loading Selections
- Locking and Hiding Objects
- Grouping Objects
- Drawing with Brush & Pencil Tool
- Changing Brush Style
- Creating New Brushes
- Changing objects shape using Brush & Pencil Tool
- Viewing Artwork in Preview Mode and Outline Mode
- Understanding Tools for Transformation
- Working with Transparency
- Blending Mode and Opacity
- Opacity Mask
- Working with Text
- Adding text
- Normally
- Inside an Object
- Over a Path
- Formatting Character and Paragraph
- Tab setting

- Text Wrapping
- Working with Glyphs
- Threading Text
- Converting Text to Paths
- Working with Images
- Placing
- Tracing
- Masking
- Working with Links Palette
- Working with Symbols
- Tools for Adjusting Symbol's Properties
- Creating New Symbols
- Working with Gradient
- Applying
- Modifying and Creating
- Working with Mesh
- Blending Objects
- Blend Tool
- Specifying Options
- Releasing
- Cutting Vector Objects
- Tools for Cutting
- Eraser
- Knife
- Scissor
- Pathfinder Palette
- Applying Illustrator Effects
- Using Graphic Style Library
- Defining new Style
- Working with Appearance Palette
- Understanding Difference between Effects and Filters
- Analyzing Templates
- Preparing Files for Printing
- Creating Registration Marks
- Creating Crop Marks
- Saving as PDF
- Exporting Illustrator files to other file formats

#### **ASSIGNMENTS FOR ILLUSTRATOR**

- Creating Vector Drawings
- Visiting Card



- ID Cards
- Brochures
- Ads / Flyers
- Magazine Covers
- Certificates
- Hoardings
- CD / DVD Labels
- Setting double side / Folding Works
- Creating Realistic Objects with Mesh

### **ADOBE INDESIGN**

- Introduction to InDesign
- Introducing the Workspace
- Overview
- Working with panels
- Customizing the workspace
- Using context menus
- Finding resources
- Getting to Know InDesign
- Viewing guides
- Adding text
- Working with styles
- Working with objects
- Working with object styles
- Creating a new Document
- Understanding Workspace
- Viewing/Zooming Document
- Normal Mode and Preview Mode
- Changing the Document Setup
- Setting Up a Document and Working with Pages
- Working with master pages
- Changing the size of pages
- Placing text and graphics
- Rulers, Guides, Grids
- Drawing Tools
- Applying Colors and Gradient
- Setting Transparency
- Working with objects
- Creating and editing text frames
- Creating and editing graphics frames
- Changing the shape of a frame

- Wrapping text around a graphic
- Transforming and aligning objects
- Selecting and modifying grouped objects
- Transforming, Aligning, Arranging Objects
- Working with Text
- Flowing Text
- Flowing text into an existing frame
- Flowing text manually
- Flowing text automatically
- Editing Text
- Finding and changing a missing font
- Checking spelling
- Editing text by dragging and dropping
- Entering and importing text
- Concept of Containers and Contents
- Specifying Columns, Drop Caps etc
- Setting up Character and Paragraph Styles
- Paragraph Rules, Numbering and Bullets
- Inserting Special Characters
- Text Wrapping and Tab Setting
- Converting to Path
- Working with Type
- Working with Color
- Creating and applying colors
- Working with gradients
- Applying colors to text and objects
- Adjusting vertical spacing
- Changing fonts and type style
- Changing paragraph alignment
- Creating a drop cap
- Adjusting letter and word spacing
- Setting tabs
- Working with Styles
- Creating and applying paragraph styles
- Creating and applying character styles
- Creating and applying object styles
- Importing and Modifying Graphics
- Adding graphics from other programs
- Comparing vector and bitmap graphics
- Working with alpha channels
- Adjusting display quality

- Working with Images
- Importing
- Masking
- Replacing
- Editing & Updating
- Adding Effects
- Creating Tables
- Formatting a table
- Adding graphics to table cells
- Creating and applying table and cell styles
- Working with Tables
- Basics of Tables
- Alternating Fills and Strokes
- Working with Columns & Guides
- Concept of Bleed & Slug
- Inserting and Deleting Pages
- Assignment
- Letter pad
- Working with Master Pages
- Working with Buttons
- Inserting Hyperlinks and Bookmarks
- Preparing Files for Printing
- Creating Crop Marks and Registration Marks
- Exporting to PDF
- Preflighting and Packaging
- Creating PDFs
- Preflighting files
- Packaging files
- Previewing the page

### **Assignment for InDesign**

- Business Card
- ID Cards
- Brochures & Flyers
- Ads / Flyers
- Magazine
- Newspaper layout & Ads.
- Setting double side / Folding Works

### **COREL DRAW**

- Introduction to Corel Draw

- Understanding Vector and Raster Objects
- Understanding Workspace
- Property Bar
- Tool Bars
- Docker
- Creating New Document
- Modifying Document Properties
- Viewing Documents
- Zooming, Scrolling and Print Preview
- Creating Objects
- Modifying Objects using Property Bar
- Applying Colors
- Creating Free form shapes
- Applying Fills
- Fountain Fill
- Pattern Fill
- Postscript Fill
- Understanding Smart Fill
- Applying Strokes
- Converting Objects to Curve
- Editing Objects with Shape Tool
- Breaking Objects Apart
- Working with text
- Artistic and Paragraph Text
- Formatting Text
- Creating Text along paths
- Inserting Symbol Characters
- Tab settings and Column Settings for Paragraph Text
- Spell Checking
- Working with Images
- Importing
- Tracing
- Masking
- Applying Bitmap Effects to Images
- Working with Interactive Tools
- Creating Objects using Interactive Mesh
- Distorting Objects
- Transforming Objects using Free Transform Tool
- Creating Multiple Objects using 'Step and Repeat'
- Cutting Objects
- Aligning and Distributing objects

- Modifying Objects using 'Shaping' Options
- Inserting Pages
- Analyzing Templates
- Preparing Files for Printing
- Working with 'Print' Dialog
- Creating Registration Marks
- Creating Crop Marks
- Publishing to PDF
- Exporting Corel Draw files to other file formats
- Native 64-bit support
- Multi-core processor support
- Multiple trays in Corel CONNECT
- You can keep multiple trays open in Corel CONNECT X6
- Search capability in Corel CONNECT
- Smart Carver
- Shape tools
- Using the Smart Carver
- Create clip mask
- Pass Through Merge Mode
- Integrated web development
- Drag-and-drop web design
- New & Enhanced! Content
- Using the Smear tool
- docker
- Adobe Plug-in support:
- Complex script support
- Page numbering
- Master Layers
- Styles engine and docker
- Color Styles
- Color harmonies
- Timeline Editor

#### **ASSIGNMENTS FOR COREL DRAW**

- Creating Vector Drawings
- Visiting Card
- ID Cards
- Brochures
- Ads / Flyers
- Magazine
- News Letters
- Certificates

- Hoardings
- CD / DVD Labels
- Setting double side / Folding Works
- Creating Realistic Objects with Mesh
- Setting double side / Folding Works

## **ADOBE LIGHTROOM**

- Workflows.
- Example Lightroom workflow
- Configuring your computer for Lightroom.
- Installing Lightroom.
- Lightroom Fundamentals
- Saving and backing up your work
- Essential troubleshooting
- The Lightroom workspace
- How to ensure accurate color for your photos
- IMPORT: Indexing photos and videos with Lightroom catalogs
- Overview of Import workflow
- What to do before importing
- Importing files for the first time: Add
- Copy files from a camera
- What happens during an import?
- The Import window
- FROM: Select a source
- Source.
- Import method
- Main preview area
- TO: My Catalog or folder Destination
- File Handling
- File Renaming
- Apply During Import
- Destination
- Import Presets
- Show fewer options: The Compact Import Window
- Import from Another Catalog
- Tethered Capture
- Tethered Capture Setup
- Auto Import
- Next steps
- LIBRARY: Managing your photos with Lightroom
- Edit a shoot
- Working in Library

- Catalog panel
- Library previews
- Navigator
- Library View Modes
- Grid view
- Selections: Choosing the photos to work with
- Rotating and flipping photos
- Stacks: Grouping items together
- Loupe view
- Compare view
- Survey view
- Using the Secondary Display with Library
- Folders panel: Work directly with folders on your hard drives
- Managing photos and video files in Library
- Synchronize Folder
- Collections: Organize things however you like
- Collections panel
- Quick Collection
- Smart Collections
- Output Module Collections
- Collection Sets
- Managing the Collections panel
- Introduction to Publish Services
- Attributes: Tag photos with identifying marks
- Filters: Show photos and videos based on criteria
- Example Filter workflows
- Quick Develop
- Keywords: Tag your photos for search
- The Keywording panel
- Keyword List
- Working with metadata
- The Metadata panel
- Metadata presets
- Metadata Status
- Using the Painter
- Working with video in Lightroom
- Example video workflow
- Next steps
- DEVELOP: Making your photos look their best
- Example Develop workflow
- Make a plan for processing

- The Develop workspace
- Understanding the Process Version
- Default and Auto settings
- Histogram
- The Basic panel: Essential adjustments for every photo
- Tone Curve: Modify tones based on ranges of luminance
- Targeted Adjustment Tool (TAT)
- HSL / Color / B & W: Adjust color by range
- Split Toning: Apply creative color treatments
- Detail: Fine-tune sharpening and noise reduction
- Lens Corrections: Fix image problems caused by the lens
- Effects: Add vignettes and simulate film grain
- Camera Calibration: Precisely control raw image rendering
- Before/After
- Crop Overlay: Cropping and straightening your photos
- Spot Removal: Retouching photos in Lightroom
- Heal Dust Spots
- Red Eye Correction
- Local Adjustments: Dodging, burning, and so much more
- Working with Graduated Filters
- Apply a graduated filter
- Working with Radial Filters
- Apply a Radial Filter
- Working with Adjustment Brushes
- Navigator panel
- Presets: Apply multiple Develop adjustments with one click
- Set Default
- Snapshots
- History: Track changes and go back to any point
- Collections.
- Virtual copies: Create multiple versions of a single photo
- Apply settings from one photo to others
- Soft proofing
- Soft proofing a photo
- Converting color photos to black and white
- Next steps
- EXPORT: Creating new copies from Lightroom
- Basic export workflow
- Export methods
- What to do before exporting
- Email photos



- Working in the Export window
- Export to:
- Export Location.
- File Naming
- Video.
- File Settings.
- Image Sizing.
- Output sharpening
- Metadata
- Watermarking
- Working in the Watermark Editor
- Post-Processing
- Export presets.
- Burn a CD/DVD
- Export plug-ins.
- Publish Services: Synchronize your photo collections
- Publish to Flickr.
- Publish to Hard Drive.
- Changing Publish Services settings
- Edit in other programs
- Edit in Photoshop.
- Open as Photoshop Smart Objects.
- Next steps.
- MAP: Plot your photo locations with GPS coordinates.
- Working with photos that already have GPS data.
- Adding GPS coordinates to photos using the map.
- Adding GPS coordinates to photos using a track log.
- Navigator.
- Saved Locations.
- Collections.
- Metadata.
- Map display.
- Location Filter.
- Map Toolbar.
- Sync Metadata
- Keeping your location data private.
- Next steps.
- BOOK: Design and order photo books in Lightroom
- Publish a book.
- Create a new book with a custom layout.
- Preview panel.

- Collections: Create and manage Saved Books
- Book previews
- Book Toolbar.
- Book Filmstrip.
- Book Preferences
- Book Settings
- About Book templates
- Auto Layout: Create a book with one click.
- Working in the Auto Layout Preset Editor.
- Page panel: Add or change pages.
- Guides.
- Cell panel.
- Text panel: Add text to photos and pages
- Type: Style your text.
- Background panel.
- About covers.
- Create Saved Book.
- Send Book to Blurb.
- Next steps.
- SLIDESHOW: Present your photos and videos on screen.
- Make a Slideshow.
- Preview.
- Template Browser.
- Collections.
- Slideshow Toolbar.
- Options.
- Layout.
- Overlays.
- Backdrop.
- Titles.
- Playback.
- Preview and Play Your Slideshow.
- Impromptu Slideshow.
- Create Saved Slideshow.
- Exporting Slideshows.
- Next steps.
- PRINT: Make professional prints yourself or at a lab.
- Making a print
- Preview.
- Template Browser.
- Collections.

- Page Setup.
- Main preview area.
- Print Toolbar.
- Layout Style.
- Single Image / Contact Sheet.
- Image Settings
- Layout.
- Guides.
- Picture Package
- Image Settings.
- Rulers, Grid & Guides.
- Cells.
- Page.
- Custom Package.
- Print Job
- Print and Printer
- Print to JPEG File
- Create Saved Print
- Print troubleshooting
- Next steps.
- WEB: Create browser-based photo galleries.
- Build a Lightroom Web Gallery.
- Preview panel.
- Template Browser.
- Main preview area.
- Web Toolbar.
- Layout Style.
- Customize your Web gallery.
- Site Info.
- Color Palette.
- Appearance.
- Image Info.
- Output Settings.
- Upload Settings.
- Create Saved Web Gallery.
- Preview in Browser.
- Export
- Upload.
- Next steps.
- WORKING WITH LIGHTROOM CATALOGS:
- Advanced photo management techniques.

- Catalog Settings.
- Catalog backups.
- Maintaining catalog integrity.
- Upgrading catalogs.
- Using multiple catalogs.
- Export as Catalog.
- Import from Catalog.
- Working with Lightroom on multiple computers.
- Road Trip Workflow.
- Next steps.
- Favorite Shortcuts.

### **Assignments for Light Room Photo editing**

- Album Designing
- Normal Image Editing of an Individual Person
- Normal Image Editing of a Group

## **MODULE – 2**

### **THEORY**

- Concept of Animation
- Animation movie making
- Principles of animation
- Introduction to digital animation
- Pre-Production
- Production
- Post Production

### **ADOBE ANIMATE (ANIMATE)**

- Introduction to Animate
- Animate workflow and workspace Stage and Tools panel
- Document Properties
- Tools
- Creating and managing documents
- Working with graphics and images
- Working with timelines
- Creating animation
- Working with scenes Using symbols, instances, and library assets
- Working with Symbols
- Creating graphics & Animating graphics, editing graphics

- Creating Buttons, Different kind of buttons,
- Creating interactivity with buttons
- Different modes of buttons
- Frame by frame & frame to frame Wee2d animation basics
- Creating Movie clips
- Features of a Movie clip
- Adding symbols to a movie clip
- Action script in symbols
- Integration of symbols
- Creating Interactive elements
- Scripting in advance
- Setting up scenes
- Primary & secondary animation
- Inserting Media Elements
- Working with text
- Working with sound
- Working with video
- Web banner advertisement
- Creating and publishing Animate Video
- Concept of Action Script
- Publishing Animate content
- Exporting from Animate

**Assignments for Adobe Animate:** Animation strip, Web animation, presentation CD

### **ADOBE CHARACTER ANIMATOR**

- Introduction

We learn the core concept behind motion capture and how Character Animator is used in contrast

to frame-by-frame or keyframe animation.

- The Structure and Components of a Character
- Understanding Scenes
- Recording and Live Streaming Concepts
- Sketching Out the Character
- Building the Face and Head
- Developing the Eyes
- Phonemes and Visemes
- Building the Body & Adding Gestures
- Checking the Hierarchy and Structure
- The Best Way To Test and Fix Problems
- Handles, Behaviors, Draggables & Sticks

- Adding Key Triggers & Sequences
- Scenes and Recordings
- Creating a Facial Performance
- Arm and Body Performance
- The Head
- The Face Template
- Creating Face Parts
- Head Rigging and Behaviors Pt. 1
- Head Rigging and Behaviors Pt. 2
- Mouth Shapes
- Creating Your Own Face from Scratch
- The Scene Menu and General Transformations
- Characterizer: The Alternate Way to Make a Face
- The Body
- Designing A Body Pt. 1
- Designing A Body Pt. 2
- Introduction to Body Rigging
- Body Rigging 2: Hinging and Welding Parts
- Body Rigging 3: Nutcracker Jaw
- Body Rigging 4: Dangles and Draggables

### **Body Rigging 5: Breathing**

- Body Rigging 6: Walk Cycles
- Body Rigging 7: Walk Cycle Options
- Hip + Shoulder Sway and Pose Emphasis
- Arm IK
- Cycles, Triggers and Behaviors
- Swap Sets Pt. 1
- Swap Sets Pt. 2
- PNG Sequences
- Photographic Puppets, Head Turns and Motion Triggers
- Puppets from Photos Pt 1: Using Lightroom
- Puppets from Photos Pt 2: Using Photoshop
- Puppets from Photos Pt 3: Photoshop Details
- Puppets from Photos Pt 4: The Body
- Puppets from Photos Pt 5: Head Turner
- Designing a Character from Drawing to Puppet
- Initial Drawing
- Working in Illustrator Pt. 1
- Working in Illustrator Pt 2
- From Illustrator to Photoshop

- From Photoshop to Character Animator
- Backgrounds in Character Animator
- Designing A Background in Adobe Illustrator
- Preparing The Background in Adobe Photoshop
- Backgrounds as Character Animator Puppets
- Cycle Layer Details
- Using Fader On Backgrounds
- Wrap Up
- Copying and Pasting a Performance
- Copying and Pasting Behaviors
- Recording and Exporting Walkthrough
- Making A Puppet File
- Final Thoughts
- Exporting

#### **AUTODESK 3DS MAX**

- Basics of 3D modeling
- Different type of 3D models
- Exterior & interior
- Anatomy
- Life sketching
- Object modeling
- Developing exterior
- Setting garden & landscape of an interior
- Create furniture & home materials
- Developing interior, placing furniture
- Low polygon char. Sketching & developing for game
- Color separation & mixing
- How to make quality textures
- Texture selection & apply
- UV mapping & advanced texturing
- How to take quality output
- Maps & materials
- How to apply textures in different objects
- Textures editing, color adjusting
- Types of textures & shades
- Different type skins
- How to render high quality map
- Advanced modeling concepts
- Concept of expressions
- Reference for high polygon human model (front side)

- Detail (head, Body)
- Detail- hand
- Detail- chest, wings, shoulder etc...
- Detail- leg
- Detail- feet & thumbs
- Muscle structure
- Create eyeball, teeth, ear & tongue
- Create cloth & hair
- Motor vehicle designing
- Detail
- Detailed texture of vehicle
- Colors make feelings
- How to influence light to textures
- Create realistic skin with photographs
- Convert models in quality map
- Realistic textures for cloth & hair
- Final touch to textures
- Different type camera angles & shot
- BG drawing
- BG painting
- BG developing
- BG balancing & Camera fixing
- Layout designing
- Posing
- Mixing characters in layout
- Quality format for rendering
- Lighting concepts
- Basic Lighting
- Physiology of light & Objective of light
- Creating depth
- Three-point light
- Shadow science
- Lighting effects
- Lighting an object
- Interior & Exterior lighting
- Lighting a room
- Environment light
- Animating lights
- Concept of Rigging
- Concept of different type bones
- Hierarchy of human and animal body



- Attaching bones with body
- Functions of human body
- Explain muscles
- How to make organic objects
- Motion science
- Introduction to production and animation
- Explain Animation Principles with Action
- Graph editor
- Object animation
- Explain different types of personality of an object
- Title animation
- Camera
- Creating walk through
- Introduce various types of Characters and its controls
- Types of walk
- Body balance
- Run
- Jump
- Walk cycle
- Character Animation
- Detailed study of characters
- Controls
- Moving hold
- In between
- Polishing (Key filtering)
- Continue -Blocking, Moving hold, In between, Polishing
- Introduction to lips
- Introduction to facial expression

### **Assignments for 3ds Max: Modeling (Inorganic & Character)**

- Texturing & Lighting
- Rigging & Animation (Object & Character)

### **Assignments Details**

#### **Assignments 1: 3D Modeling & Texturing**

3D model of Concept Art with texture

An Interior or Exterior Model with texture and light

#### **Assignments 2: Animation**

Character Animation

Face animation (any expression) with detailed face texture

## **3D DESIGN WITH BLENDER**

### **Introduction to Visual Effects and Blender**

- The History of Visual Effects
- 3D: General Principles
- Downloading, Installing, and Setting Up Blender
- Getting Around 3D
- Making and Rendering Your First Scenes

### **Editing Objects**

- Basic Principle: Data blocks
- Introduction to Edit Mode
- Separating and Joining Objects
- Object Modifiers
- Converting to Mesh from Curve

### **Texturing, Principles, and Practice**

- How to Visually Break Down Materials
- Materials, Textures, and How They Get onto Surfaces
- UV Mapping Basics
- Textures in More Depth
- More Complicated Procedural Textures with Nodes
- Material Nodes

### **Further Texturing and Rendering in Cycles**

- Three-Point Lighting Setup
- Advanced Textures
- Camera Effects and Properties
- Cycles Renderer and Its Settings

### **Sculpting and Baking Normal Maps**

- Preparation for Sculpting
- Sculpting Detail
- Baking
- Retopologizing
- Automatic Tessellation and 3D Sketching

### **Compositing**

- Breakdown of a Scene
- Buildup of a Scene
- Color Correction and Texture Editing
- Sweetening and VFX

### **Basic Animation—Camera and Objects**

- Concepts of Animation

- Constraints for Automating Animation
- Animated Textures
- Output to Video Files

### **Camera Mapping and 2.5D**

- Parallax Described and Demonstrated
- 2.5D Plate Preparation
- 2.5D When?
- Web and Interactive—2.5D/3D GIF and VR Imagery

### **Tracking and Replacement**

- Tracking and Replacement Principles
- Tracking—Practical Examples
- Tracking—Addition and Replacement
- Use of Green-Screen (Monochromatic Environment Removal)

### **Animation of Characters**

- The Armature
- Bones
- Poses and Keyframes
- Tips for Animation

### **Particles and Fluids**

- Particle Basics
- Setting Up Particle Systems
- Texturing of Particles
- Particles as Hair

### **Video Editing and Addition of Sound**

- Working with Sound/Video Sequence Editor
- Compositor
- Sound Effects
- Final Output

### **ADOBE AFTER EFFECTS**

- Introduction to post production
- Concepts of Visual effects & Compositing
- Compositing tools
- Concepts of Visual effects
- How to work in film industry
- Difference between old and new movies
- Techniques used in old & new movies
- About matte painting (Basics)
- Matte painting practice
- Composition with matte painted file
- Classes for visual effects

- Introduction to software
- View Port & Tools
- Apply basic & advanced tools
- Introduction to live action movies
- Brushes & color palette
- Wire removal (Basics)
- Wire removal practice
- Show examples
- Rotoscopy (Masking)
- Chroma techniques
- Blue matte cutting
- Trial effects
- Live action movie
- Tracking
- About camera and object tracking
- Color theory
- Lights
- Color correction

## **Project: Compositing & VFX**

### **NUKE**

#### **The Nuke Interface**

- Navigating the interface
- Building Node Graphs
- Creating key frames
- The Curve Editor

#### **Transformations and Animation**

- Keyframe animation
- Math expressions and linking
- Creating animated elements
- Correcting for lens distortion

#### **Color and Rotoscoping**

- Nuke's color management
- Color correcting composites
- Rotoscoping
- Masking operations

#### **Compositing CGI and Channels**

- Mastering Nuke's channels system
- Multi-pass CG compositing
- Adding motion blur
- Adding depth of field

## **Keying**

- Lumakeys
- All four of Nuke's chromakeyers
- Proper use of Addmix and Keymix nodes
- How to merge multiple keys

## **Tracking, Warping and Retiming**

- The Tracker node
- How to do a match move
- Spline warp and Grid warp
- Retiming clips with optical flow

## **3D Basics**

- Navigating Nuke's 3D workspace
- Working with geometric primitives
- Projecting texture maps
- Rendering 3D scenes

## **3D Animation and Shaders**

- Animating 3D geometry
- Deforming 3D geometry
- Adding lights, shaders and materials to geometry
- Normals relighting

## **Production Workflows**

- Adding a 3D background to a CG render
- Camera projection
- Rig removal
- Set extension

## **Camera Tracking**

- How to do camera tracking
- Converting point clouds to meshes
- Compensating for lens distortion
- Getting 3D information to the 2D composite

## **Planar Tracker and Particles**

- How to do planar tracking
- How to use planar tracking results
- Using Nuke's 3D particle system
- Creating your own particles

## **Advanced 3D Nodes**

- Deep compositing
- Alembic geometry
- Modeling 3D geometry from a 2D scene
- Creating point clouds from CG re

## MODULE - 3

### ADOBE PREMIERE PRO

- Introduction to post production
- Concepts of editing & Compositing
- Linear & Linear editing
- Editing tools & software
- Editing software
- Rough cutting
- Rhythmic editing
- Speed, duration & Timing
- File formats
- Tools & Menu
- Crop, Slide, Roll
- Creation of cultist
- Video effects
- Video transitions
- Working with audio
- Exporting the video
- Concepts of effects
- Plug-ins
- Working with images
- Titles
- Scroll & Crawl
- Working with animations
- Keying & other compositing methods
- How to work in film industry
- Difference between old and new movies
- Techniques used in old & new movies

### Assignment: Video editing & Rendering

- Audio synchronization
- Adding video effects & filters
- Editing
- A movie trailer
- Title work

### ADOBE AUDITION

#### Introduction to Adobe Audition

- New features summary
- System requirements | Audition

- Customizing workspaces
- Finding and customizing shortcuts
- Applying effects in the Multitrack Editor

### **Workspace and setup**

- Control surface support
- Viewing, zooming, and navigating audio
- Customizing workspaces
- Connecting to audio hardware in Audition
- Customizing and saving application settings

### **Digital audio fundamentals**

- Understanding sound
- Digitizing audio

### **Importing, recording, and playing**

- Multichannel audio workflow
- Create, open, or import files in Adobe Audition
- Importing with the Files panel
- Extracting audio from CDs
- Supported import formats
- Navigate time and playing audio in Adobe Audition
- Recording audio
- Monitoring recording and playback levels

### **Applying effects**

- Enabling CEP extensions
- Effects controls
- Applying effects in the Waveform Editor
- Applying effects in the Multitrack Editor
- Adding third party plugins
- Notch Filter effect
- Fade and Gain Envelope effects (Waveform Editor only)
- Manual Pitch Correction effect (Waveform Editor only)
- Graphic Phase Shifter effect
- Doppler Shifter effect (Waveform Editor only)

### **Effects reference**

- Apply amplitude and compression effects to audio
- Delay and echo effects

- Diagnostics effects (Waveform Editor only) for Audition

## **ADOBE AUDITION**

### **Contents**

- Filter and equalizer effects
- Modulation effects
- Reduce noise and restore audio
- Reverb effects
- How to use special effects with Audition
- Stereo imagery effects
- Time and pitch manipulation effects
- Generate tones and noise

### **Mixing multitrack sessions**

- Creating remix
- Multitrack Editor overview
- Basic multitrack controls

### **Multitrack routing and EQ controls**

- Arrange and edit multitrack clips with Audition
- Looping clips
- How to match, fade, and mix clip volume with Audition
- Automating mixes with envelopes
- Hardware controllers and recordable automation
- Multitrack clip stretching

### **Video and surround sound**

- Working with video applications
- Importing video and working with video clips
- 5.1 surround sound

### **Saving and exporting**

- Save and export audio files
- Viewing and editing XMP metadata

## **MODULE – 4**

### **MULTIMEDIA FINAL PROJECT**