

Himachal Pradesh University

One Year Diploma in Animation Technology (DID)

Programme Name : post Graduate Diploma in Graphics & Animation.

PG Diploma in Animation & Graphics Duration : 12 Months Eligibility : Graduation

For the last two decades Graphics & animation have started taking over major share in Media and Entertainment. From the various fields of TV, Film, Advt, News, Games etc. animation have become the major role player. Quite naturally the industry needs performers to execute different roles like concept designer, Layout Designer, Story Board Artist, Modeller, Animator, Texturing Artist, Rigger, Effects Artist, Compositor, Editor etc.

The Graphics & animation course directly suggested by the Industry professionals on the basis of the Industry requirement. A bullet course was required to create robust and outstanding performers who can understand the current and future industry needs and perform at par.

Subject Code:

Duration:

SEMESTER -1

Drawing & Sketching

45 Days

- Importance of Drawing & Sketching in Animation.
- Fundamentals of Visual Arts.
- Still life study and Pencil shading.
- Drawing with simple geometrical shapes.
- Stick drawing
- Rapid sketching
- Perspective study
- Introduction to Colours.(Primary ,Secondary and Tertiary).
- Tint ,Shades , Hues & Tones.
- Warm and Cool colours .
- Drawing from Nature & colour it. (Trees,Landscape etc. using any medium i.e water,pencil or pastel etc.)
- Study of Human Anatomy.
- Head Study.
- Creating cartoons from basic shapes.
- Facial expressions study.
- How to develop a concept.
- Writing a short story based on a specific Theme.

- Developing the story cinematically into shots and sequences. (shot division)
- Converting a Story into Storyboard.
- Submission of project.

CODE :

SUBJECT: ADOBE PHOTOSHOP

DURATION : 40 Days

ADOBE PHOTOSHOP: This is a Raster based software used for Designing and photo editing work.

. also used for still Image background, Texturing for 3D.

INTRODUCTION TO PHOTOSHOP

- Raster / Vector Graphics.
- Tools
- Menu.
- Colour Modes.

WORKING WITH FILE FORMATS

- Introduction to different File formats , JPEG,TIF,PSD,PNG etc.

SELECTION TOOLS

- Cutting and copying.
- Resizing and Transformation.

WORKING WITH LAYERS, MULTIPLE LAYERS

- Layer modes.

BRUSHES

- Color Theory: Digital colour basic, RGB, CMYK,GREY SCALE, color wheel, color values.
- Working with various Brushes.

WORKING WITH MASKS

- Applying Masks.
- Layer Mask
- Quick Mask.

PEN TOOL

- Making selection with pen Tool.
- Designing a Logo or object with pen Tool.

HOW TO EDIT IMAGES(Adjustment layers)

- Colour correction, colour Balance, Hue Saturation, Levels, curves.

USING FILTERS

- Working with filters.
- Using various filters on Images.

Digital painting.

Inorganic painting

Organic painting

CREATING MATTE PAINTING

- Introduction to matte painting
- Developing layered matte.
- Adjusting light and perspective.
- Make Matte painting using different Images.

Project work:

Submission of project:

CODE:

SUBJECT : COREL DRAW

DURATION: 25 Days.

COREL DRAW : Corel Draw is vector based graphic software used to create Designs, Logo,Layouts, Illustrations for advertising and publishing purpose.

INTRODUCTION TO COREL DRAW

- Basic Drawing skills.
- Selecting and manipulating objects.
- Drawing and shaping objects. Using various Tools.
- Arranging objects.

USING TEXT AND COLOUR

* Using text and Colour.

* Working with paragraph Text. & other Techniques.

WORKING WITH OBJECTS.

- Outlining and filling objects.
- Using symbols and clip art.

- Transforming objects.

ADDING SPECIAL EFFECTS.

- Special effects.
- Exporting Drawing.
- Painting.

LAYOUT AND LAYERS

- Special page Layout.
- Arranging objects.
- Using Layers.

STYLES AND TEMPLATES

- using styles and Templates.

ADVANCE EFFECTS.

- Special Interactive Effects.
- Custom creation Tools.
- Working with Bitmaps.

Project: .Designing a Commercial project

CODE :

SUBJECT : ADOBE FLASH

DURATION: 40 days.

This is a popular software used to create vector graphics, 2D animation and internet applications which can be viewed , executed on the Adobe Flash player. Adobe Flash is the primary Tool for 2D animation movies of Low file size.

Introduction to animation

- **Interface of Flash environment**
- Timelines

Toolbar options

- Arrow, pencil, brush, eraser tool
- Magnifier, text tool, ink bottle
- Paintbucket, eyedropper & lasso tool

Modify - Document

Working with text - edit, break apart

Transform options

Animation techniques

- Using timelines and layers
- Difference between frames, blank keyframes, keyframes, etc.

Shape tweening of objects and texts

Working with symbols

- Creating graphic symbols
- simple motion tweening
- use of guide layers for motion tweening
- tweening properties like rotation, orient to path, loop and other
- instance, properties
- Creating button symbols
- edit the button symbol to give different effects for rollovers and clicks
- assigning actions like start, stop, etc.

Library Window and color mixer window.

- **Grouping of elements**
- **Importing and working with Bitmaps**

Simple animation using Motion tweening - (Creating Graphic Symbols)

- From One Point to another
- Rotation Property
- Scalling , Color Style Properties

Animation using Shape tweening

- Layer Properties
- Motion along a path using guide layer

Image Slicing

- Naming Slices & Inserting Slices
- Layer Masking
- Frame by frame animation
- Editing animations, deleting frames ,inserting frames

Library & library Properties

- **Creating animations** for showing special effects

Effects

- Ripples effect

Creating Movie-Clip symbols

- Converting an existing animation into a movie-clip

- Placing movie-clips inside the button symbol
- Placing movie-clips inside the graphic symbol

Cell animation

Writing Text

Creating interactive movies/CD presentations using the above animation techniques

Adding sounds to a movie/presentation, importing and editing sounds

Creating websites or home-pages of any website

Optimizing movies & exporting movies for the web

Exporting files

Project: Designing cartoon characters that are simple, Expressive & easy to animate.

SEMESTER –II

CODE :

SUBJECT : Autodesk Maya

DURATION: 4 Months

Introduction Overview of developing a 3D animation from modeling to rendering: Basics of surfacing, lighting, animation, and modeling techniques. Advanced topics: compositing, particle systems, and character animation.

Introduction to 3D Animation

- Introduction to the Maya
- Basic 3D transforms (translation, rotation, scaling) and animation

Creating a 3D models from primitives

- Further introduction to the Maya GUI
- Polygon components (vertices, edges, faces)
- Creating and editing geometry from primitives
- Groups and Hierarchies
- Duplication vs. Instancing

Polygon mesh editing tools

- Additive vs. subtractive modeling
- Manually manipulating component
- Splitting polygons vs. deleting edges
- Polygon extrusion

Materials and Texturing

- Understanding UV texture space
- Simple UV projection
- Introduction to materials and textures
- Basic lighting

Cameras and lighting

- Review key framing techniques
- Animating props and cameras
- Using the Render Settings window to prepare a scene for render

Animation, Rendering, and Output Techniques

- Rendering image sequences from Maya
- Importing image sequences into post production and compositing
- Creating QuickTime movies

NURBS and spline-based modelling

- Basic NURBS spline-based modeling concepts
- NURBS to polygon conversion
- Boolean modeling techniques
- Construction history
- Essential steps to prepare a character model for animation

Basic character setup

- Non-linear deformers
- Deformation order
- Hierarchies for animation

Animating a simple character

- Key framing tools and techniques
- Using the Graph Editor
- Understanding motion curves, keys, and tangents

Posing a character

- Working with Forward Kinematics (FK) and skeleton hierarchies
- FK keying process
- Strong poses
- Animating to the camera

Blocking out a performance

- Working with Inverse Kinematics (IK) and skeleton hierarchies
- IK keying process
- Breaking down a performance
- Anticipation, weight, and timing

Refining performance

- Using the graph editor to fine tune a performance
- Secondary motion

Dynamic particle systems

- Adding and using canned effects to a scene
- Customizing particle effects

Mental Ray and special topics in 3D rendering

- Differences between the software and Mental Ray renderer
- Benefits of Mental Ray

- Final gathering
- Image based lighting (IBL) and High Dynamic Range Images (HDRI)

Compositing and final polishing techniques

- Networked and distributed rendering
- Compositing and post effects

Project:

CODE : SUBJECT : AFTER EFFECTS

DURATION: 15 Days

- Introduction and Interface

Basics

- Importing Footage and Editing, Data Management
- Key-framing and Tweening
- Workflow, Exporting and File Formats
- Masks, Layer Modes, Basic Effects

Advanced motion]

- Keying Layer Properties
- Nesting, Pre-comping, Non-destructive Workflow
- Text, Type and Kinetic Typography

Working on Video Footages

- Color Correction in After Effects
- Manipulating Footage

VFX Basics

- Green Screening
- Rotoscoping
- Effects

Motion tracking and lightning

- 3D Camera and Mocha
- Particles and Physics

Project:

CODE : SUBJECT : Nuke

DURATION: 10 Days

Introduction to Nuke User Interface

- menu bar / tool bar / pane / tab
- viewer / node graph / curve editor / properties bin / progress bars / script editor

UI Customization

- split pane
- moving tabs & floating bins
- preferences
- save & restore custom UI layouts & reset to manufacturer default layouts

Organization of Tools in Nuke

- tool groups / node types / node indicators
- 4 ways to add a node

About the Viewer

- multiple views & multiple viewers
- viewer-only controls
- play controls
- viewer buffer & scanline processing
- proxy
- ROI

Basic Compositing Workflow in Nuke

- auto-save
- Project Settings
- Read & Write nodes – Nuke file name variables
- file formats
- color space in Nuke
- colorspace LUT & viewer LUT
- Reformat
- adding / deleting / connecting / finding nodes
- Merge
- linear vs non-linear undo
- Properties Bin & Control Panel controls

Multi-channel Workflow

- reading & writing multi-channel exr
- working with multi-channel images
- separating & combining channels

Flipbooking

- hard cache
- Nuke viewer vs FrameCycler
- connecting to video output & stereo output devices

Transforming

- control overlay vs control panel
- keyframing
- Curve Editor
- Crop / AdjustBBox & bonding box

Warping & Morphing

Color Manipulation

- ColorCorrect / Grade / HueCorrect / Histogram
- matching grade

Keying

- luminance key / chroma key / difference key
- Primatte

- Keylight
- image based keyer – IBK
- color spill treatment

Rotoscoping

- RotoPaint tools & controls
- rotoscoping with RotoPaint

Tracking

- 1~4 point tracking / off screen tracking
- tracking data modification
- application of tracking data beyond stabilization
- corner-pinning

Precomp

Motion Blur

Gizmo

- making a Gizmo
- exporting & using a Gizmo

3D Workspace

- 2D vs 3D compositing
- card / obj / camera / light / scene
- basic 3D compositing setup
- ScanlineRender
- basic setup for camera projection
- DisplaceGeo & its applications

Stereoscopic (multi-view) Compositing

- Project Setting for stereo projects
- reading & writing stereo images
- stereo workflow
- disparity map
- common problems with stereo footages
- Ocula demo – plug-ins for solving the problems of stereo footages

Lens Distortion

- 3 methods to perform lens distortion analysis
- applications of the result from lens distortion analysis

3D Camera Tracker

- operations & applications
- built-in lens distortion analysis tool

DepthGenerator

Project:

CODE : SUBJECT : ADOBE Audition

DURATION: 3 Days

- Basics of digital audio as it relates to interactive media, authoring and the Internet.
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- Copyright issues, stock audio.
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- Digital Audio Formats
-
- 2 track/multi-track audio editing software for interactive media.
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- Relationship between sound editing software and the interactive media authoring environment.
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- Internal vs. Externally linked sound files
-
- Controlling sound in interactive media authoring software
-
- Instance names, Objects, Functions
-
- Media Playback Components
-
- Digital Video deployment on the web
-
- Digital Video for Interactive Media
-
-
- Video Formats
-
- Video encoding overview
-
- Video/Audio export Settings for Internet (Progressive Download)Interactive Media authoring/scripting for Digital video

CODE : SUBJECT : ADOBE PREMIERE

DURATION: 10 Days

- Introduction to Linear Editing .
- Basic Editing.
- Adding Video Transitions.
- Integrating Audio.
- Addding video effects .
- Working with Titles.
- Superimposing.
- Animation
- **FINAL PROJECT SUBMISSION:**

One Year Diploma in Interior Designing

Himachal Pradesh University

Syllabus

One Year Diploma in Interior Designing (DID)

SEMESTER I

Course Title	Paper Code	Marks		
		Theory	Practical	Total
Communication Skills	DID-S 110	100	00	100
Introduction to Computers & Elementary Mathematics	DID-S 120	75	25	100
Basics of Drawing & Graphics - 1	DID-S 130	75	25	100
Elements of Design	DID-S 140	100	00	100

SEMESTER II

Course Title	Paper Code	Marks		
		Theory	Practical	Total
Elements of Material -I	DID-S 210	100	00	100
Basics of Drawing & Graphics -II	DID-S 220	50	50	100
Interior Furnishing -I	DID-S 230	100	00	100
Principles of Marketing Management	DID-S 240	100	00	100