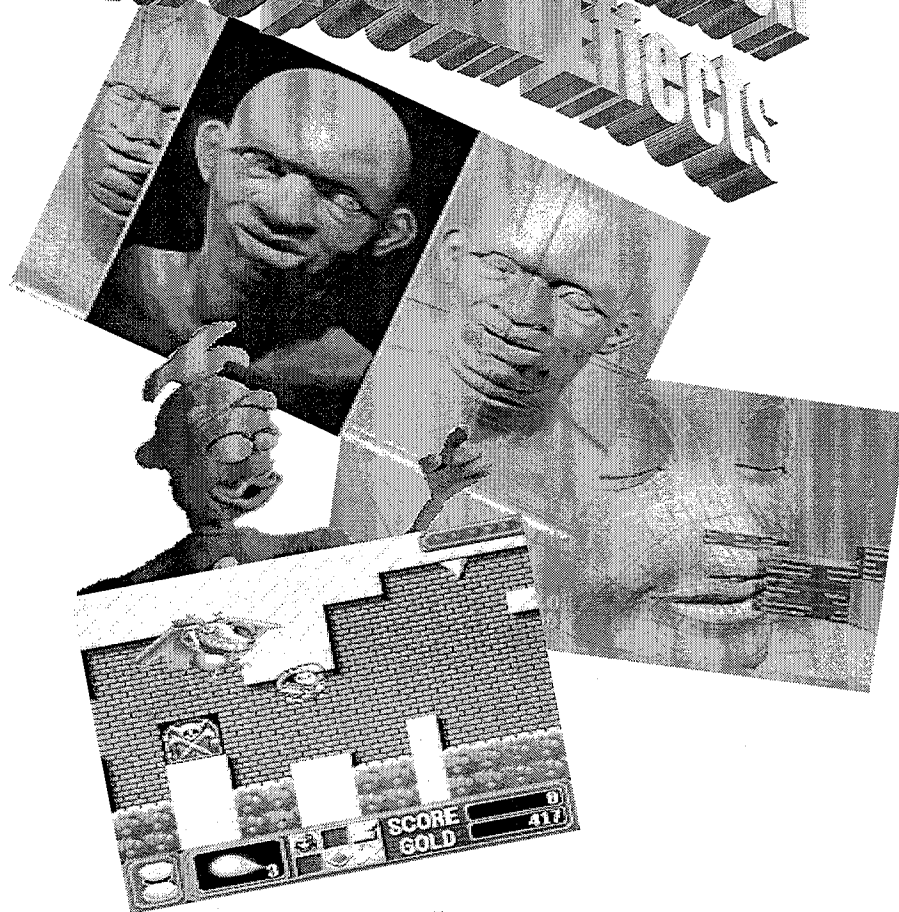
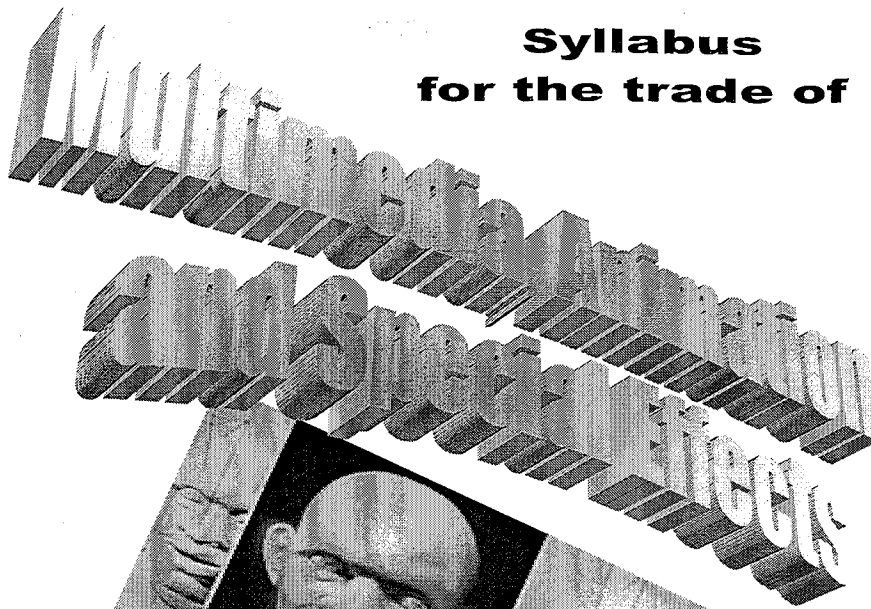


**Syllabus  
for the trade of**



**under  
Craftsmen Training Scheme**

**Year 2009**

**prepared by**

**Government of India  
Ministry of Labour & Employment (D.G.E.&T.)  
CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE  
EN – Block, Sector-V, Salt Lake City,  
Kolkata-700 091**

List of members attended the Trade Committee Meeting for designing the course curriculum  
under Craftsmen Training Scheme on  
**MULTIMEDIA, ANIMATION & SPECIAL EFFECTS** held on 16.09.2009  
at Central Staff Training & Research Institute, Kolkata

Sl. No.	Name and Designation	Organisation	
1.	Mr. S. D. Lahiri, <i>Director</i>	C.S.T.A.R.I., Kolkata	Chairman
2.	Mr. Pulakesh Goswami, <i>Sys. Administrator</i>	WEBEL- DQE Animation Academy, Kolkata	Member
3.	Ms. Srimati Mukerjee, <i>Centre Head</i>	WEBEL- DQE Animation Academy, Kolkata	Member
4.	Mr. R. Saravanan	WEBEL- DQE Animation Academy, Kolkata	Member
5.	Mr. Satya Padhi	DQ Animation, Kolkata	Member
6.	Mr. Samar Bhattacharaya, <i>Director</i>	Jadavpur University, School of Edu. Technology, Kolkata.	Member
7.	Mr. Arup Chattopadhyay, <i>Systems Manager</i>	DOEACC Society, Kolkata Centre, JU Campus	Member
8.	Mr. R. Debnath, <i>ADIT</i>	Directorate of Indl. Trg., Govt. WB, Kolkata	Member
9.	Mr. Srikanta Bhowmik, <i>Zonal Academic Head</i>	MAAC, Kolkata	Member
10.	Mr. Sudipta Seal, <i>Zonal Manager</i>	MAAC, Kolkata	Member
11.	Mr. Atanu Choudhury, <i>General Manager</i>	Aesthetic Technologies Karmyog Foundation,	Member
12.	Mr. Sourabh J. Sarkar, <i>Founder &amp; CEO</i>	Aesthetic Technologies Karmyog Foundation,	Member
13.	Ms. Soma Banerjee, <i>Executive Creative Resources</i>	SEARS Communication Pvt. Ltd. Kolkata	Member
14.	Mr. Sudhriti Roy, <i>Asstt. Manager</i>	SEARS Communication Pvt. Ltd. Kolkata	Member
15.	Mr. T. K. Hazra, <i>Faculty Member</i>	Bengal Indl. Training Centre. Kolkata	Member
16.	Ms. Sreemoyee Chatterjee, <i>Centre Head</i>	Indian Institute of Digital Art & Animation, Kolkata	Member
17.	Mr. Sujay Kumar Bagchi, <i>3D Faculty</i>	Indian Institute of Digital Art & Animation, Kolkata	Member
18.	Mr. Arghya Roy, <i>2D Faculty</i>	Indian Institute of Digital Art & Animation, Kolkata	Member
19.	Mr. Tapan Kumar Chakraborty, <i>Faculty Member</i>	Roopkala Kendra, Kolkata	Member
20.	Mr. Anupam Dasgupta, <i>Content Management</i>	Aesthetic Technologies, Kolkata	Member
21.	Mr. Santanu Mukherjee, <i>Media Head</i>	Aesthetic Technologies, Kolkata	Member
22.	Mr. Pavel Shee, <i>Supervisor</i>	ANI WAY, Barrackpore, 24-Pgs(N), WB.	Member
23.	Shri Anil Kumar, <i>Joint Director</i>	C.S.T.A.R.I., Kolkata	Member
24.	Shri M. C. Sharma, <i>Joint Director</i>	C.S.T.A.R.I., Kolkata	Member
25.	Shri L.K. Mukherjee, <i>Deputy Director</i>	C.S.T.A.R.I., Kolkata	Member
26.	Mr. N. Nath, <i>Asstt. Director</i>	C.S.T.A.R.I., Kolkata	Member
27.	Mr. S. B. Sardar, <i>Asstt. Director</i>	C.S.T.A.R.I., Kolkata	Member
28.	Mr. R. N Manna, <i>Trg. Officer</i>	C.S.T.A.R.I., Kolkata	Member
29.	Mr. Prasoon Kumar Ghosh, <i>SDM</i>	C.S.T.A.R.I., Kolkata	Member

Syllabus for  
**Animation , Multimedia & Special Effects**  
Under  
Craftsmen Training Scheme

**OBJECTIVE OF THE COURSE:**

This course is a study of the art and science of computer animation. Both programming and utilization of animation software will be covered with an emphasis on the latter. The topics include NURBS and Polygon modelling, rendering techniques, motion path, and introductory applications in computer gaming. After successful completion of the training programme the following skills would be developed:

- Acquired fundamental knowledge for 2-D and 3-D computer graphics design.
- Developed skills in operations of animation software in terms of its menus and its embedded language.
- Exhibit skills in using animation software or Blender to model objects by creating a portfolio of models of objects.
- Show introductory skills in designing a short animated movie by creating short movie clips.
- Show skills in applying various shading and rendering techniques as shown in the created models.
- Able to design several models of real life objects such as chairs, cars, and houses as well as short animated film clips through the course.
- Able to apply simple 2-D & 3-D computer animation or computer games (Assessed through programming project and test).
- Able to create programme on animation and special effects.

**Training Methodology:**

- Interactive Pedagogy
- Class Room Training
- Practical Training
- Audio Visual method
- Role Play

**ELIGIBILITY :** 10th Class Passed.

**Duration of Training:** 52 weeks (40 hours / week)

**NCO Code :** 3131.20, 2452.70

**Space Norms :** Class room : 20 sq. metre  
Studio : 50 sq. Metre  
Lab: 80 sq. Metre

**Power Norms:** 6 Kw

Syllabus for  
**Animation , Multimedia & Special Effects**  
 Under  
 Craftsmen Training Scheme

Week no.	Theory	Practical
1 – 4	<p><b><u>Basic computer &amp; graphic skills</u></b></p> <p><b>Introduction to Computing</b></p> <ul style="list-style-type: none"> <li>• Introduction to Computers</li> <li>• Classification of computers based on size, purpose and operation</li> <li>• Anatomy of computers</li> <li>• Number systems used in computers</li> <li>• Input and output devices</li> <li>• Block diagram of CPU</li> <li>• Operating system software               <ul style="list-style-type: none"> <li>• DOS</li> <li>• Working with DOS Commands</li> <li>• Windows</li> <li>• Basics</li> <li>• Accessories</li> <li>• File Manager and Program Manager</li> </ul> </li> <li>• Programming language</li> <li>• Utility Software</li> </ul> <p><b>Safety and occupational health:</b></p> <ul style="list-style-type: none"> <li>➤ Cramped room and ill-light working environment damage the eye sight and develop stress symptoms.</li> <li>➤ Proper sitting posture.</li> <li>➤ Proper lifting of posture of heavy monitor, computer, printer and other office machineries may cause back pain.</li> <li>➤ When direct physical telephone line is used for internet connection make sure it is being detached whenever there is thundering.</li> </ul> <p><b>Environment:</b></p> <ul style="list-style-type: none"> <li>➤ Pollution of environment due to e-waste like junk key board, components of computer and other office machineries</li> <li>➤ Waste recovery facility through inter industry exchange.</li> </ul> <p><b>Word Processing</b></p> <ul style="list-style-type: none"> <li>• Introduction to Word Processing</li> <li>• Editing a Document</li> <li>• Move and Copy Text and Help System</li> <li>• Formatting Text and Paragraph</li> <li>• Finding and Replacing Text and Spell Checking</li> </ul>	<p><b>Familiarization with computer and its accessories.</b></p> <p>Customization with desktop.</p> <p><b>Tools to be Used : MS Office</b></p> <p><b><u>MS Office</u></b></p> <p>Preparation of a document using different toolbar.</p> <p>Creating objects using drawing toolbar with shading, filling colour, grouping and placed in order. Creating artistic page</p>



Week no.	Theory	Practical
	<p><b>Color Theory</b> Principles and techniques for the perception and effective use of color in all media. Includes work with values, neutrals, basic color schemes.</p> <p><b>Painting</b> Materials and techniques of painting. Subject matter includes still life, landscape and figurative studies. Emphasis is on individual development and response to the media.</p> <p><b>Illustration Techniques</b> An introduction to various illustrational styles, techniques and media used in the creation of pictorial illustration as applied to commercial art.</p> <p><b><u>Graphics Editing Techniques</u></b> <b>Introduction</b></p> <p><b>Creating Graphics Editing Tool Documents</b></p> <p><b>The Graphics Editing Tool Interface</b></p> <p><b>Basic Drawing</b></p> <p><b>Basic Path Editing</b></p> <p><b>Basic Text Editing</b></p>	<p>composition and experimental techniques in different media.</p> <p><b>Color Theory</b></p> <p><b>Painting</b> Still life, landscape and figurative studies.</p> <p><b>Illustration Techniques</b> Creation of pictorial illustration as applied to commercial art.</p> <p><b><u>Graphics Editing Techniques</u></b></p> <ul style="list-style-type: none"> <li>• Use of Graphics Editing Tool.</li> <li>• Knowledge about vector graphics.</li> <li>• Understanding paths</li> <li>• Fill and stroke attributes</li> <li>• Selections and stacking order</li> </ul> <p><b>Editing Graphics</b></p> <ul style="list-style-type: none"> <li>• The Welcome screen</li> <li>• Important document settings</li> <li>• Exploring panels and workspaces</li> <li>• Using the control panel</li> <li>• Navigating within a document</li> <li>• Using guides and grids</li> <li>• Utilizing the bounding box</li> <li>• Using smart guides</li> <li>• Choosing preview options</li> </ul> <p><b>Drawing</b></p> <ul style="list-style-type: none"> <li>• Using the basic shapes tools</li> <li>• Drawing with the Pen tool</li> <li>• Drawing with the Pencil tool</li> <li>• Painting with the Paintbrush tool</li> </ul> <p><b>Editing</b></p> <ul style="list-style-type: none"> <li>• Creating compound shapes</li> <li>• Utilizing pathfinder functions</li> <li>• Using the Eraser tool</li> <li>• Joining and averaging paths</li> <li>• Outlining strokes</li> <li>• Simplifying paths</li> </ul> <p><b>Text Editing</b></p> <ul style="list-style-type: none"> <li>• Creating point text</li> </ul>

Week no.	Theory	Practical
	<p><b>Making Selections</b></p> <p><b>Understanding Appearances</b></p> <p><b>Working with Groups and Layers</b></p> <p><b>Advanced Drawing and Path Editing</b></p> <p><b>Working with Color</b></p> <p><b>Object Transformation and Positioning</b></p>	<ul style="list-style-type: none"> <li>• Creating area text</li> <li>• Applying basic character settings</li> <li>• Applying basic paragraph settings</li> <li>• Creating text threads</li> <li>• Creating text on a path</li> <li>• Converting text to outlines</li> </ul> <p><b>Use of Selection Tool</b></p> <ul style="list-style-type: none"> <li>• Using the basic selection tools</li> <li>• Using the Magic Wand and the Lasso tool</li> <li>• Selecting objects by attribute</li> <li>• Saving and reusing selections</li> </ul> <p><b>Appearances</b></p> <ul style="list-style-type: none"> <li>• Targeting object attributes</li> <li>• Adding multiple attributes</li> <li>• Applying live effects</li> <li>• Expanding appearances</li> <li>• Creating graphic styles</li> <li>• Modifying graphic styles</li> <li>• Appearance palette settings</li> <li>• Copying appearance</li> </ul> <p><b>Working with Groups and Layers</b></p> <ul style="list-style-type: none"> <li>• Defining groups</li> <li>• Editing groups</li> <li>• Working with layers</li> <li>• Layers and object hierarchy</li> <li>• Creating template layers</li> <li>• Object, group, and layer attributes</li> </ul> <p><b>Advanced Drawing and Editing Path</b></p> <ul style="list-style-type: none"> <li>• Creating Live Paint groups</li> <li>• Detecting gaps in Live Paint groups</li> <li>• Path editing with Live Paint</li> <li>• Using Offset Path</li> <li>• Dividing an object into a grid</li> <li>• Cleaning up errant paths</li> </ul> <p><b>Working with Color</b></p> <ul style="list-style-type: none"> <li>• Defining swatches</li> <li>• Creating swatch groups and libraries</li> <li>• Working with gradients</li> <li>• Working with patterns</li> <li>• Using the Color Guide</li> <li>• Experimenting with color</li> <li>• Finding colors with kuler</li> <li>• Modifying color in artwork</li> </ul> <p><b>Transformation and Positioning</b></p> <ul style="list-style-type: none"> <li>• Rotating and scaling objects</li> <li>• Reflecting and skewing objects</li> <li>• Using the Free Transform tool</li> <li>• Using the Transform panel</li> <li>• Aligning objects</li> <li>• Distributing objects</li> </ul>

Week no.	Theory	Practical
	<p><b>Use of Brushes</b></p> <p><b>Use of Masks</b></p> <p><b>Use of Symbols</b></p> <p><b>Application of Filters and Live Effects</b></p> <p><b>Advanced Text Editing</b></p> <p><b>Designing for the Web</b></p> <p><b>Creation of Blends</b></p> <p><b>Working with Images</b></p>	<p><b>Using Brushes</b></p> <ul style="list-style-type: none"> <li>• Creating a calligraphic brush</li> <li>• Creating a scatter brush</li> <li>• Creating an art brush</li> <li>• Creating a pattern brush</li> </ul> <p><b>Working with Masks</b></p> <ul style="list-style-type: none"> <li>• Understanding clipping masks</li> <li>• Using layer clipping masks</li> <li>• Creating opacity masks</li> </ul> <p><b>Using Symbols</b></p> <ul style="list-style-type: none"> <li>• Defining symbols</li> <li>• Editing symbols</li> <li>• Using the Symbolism toolset</li> </ul> <p><b>Applying Filters and Live Effects</b></p> <ul style="list-style-type: none"> <li>• Minding your resolution settings</li> <li>• Mapping artwork to 3D objects</li> <li>• Using the Transform effect</li> <li>• Using the Pathfinder effects</li> <li>• Using the Stylize effects</li> <li>• Using the Scribble effect</li> <li>• Using the Warp effect</li> </ul> <p><b>Advanced Text Editing</b></p> <ul style="list-style-type: none"> <li>• Taking advantage of OpenType fonts</li> <li>• Using the Glyphs panel</li> <li>• Wrapping text around objects</li> <li>• Checking spelling</li> <li>• Using the Change Case function</li> <li>• Setting tabs and leaders</li> <li>• Managing fonts</li> <li>• Dealing with legacy text</li> </ul> <p><b>Web Designing</b></p> <ul style="list-style-type: none"> <li>• Using Pixel Preview</li> <li>• Specifying web slicing</li> <li>• Optimizing web graphics</li> <li>• Creating simple animations</li> </ul> <p><b>Creating Blends</b></p> <ul style="list-style-type: none"> <li>• Creating a basic blend</li> <li>• Using a blend to create an airbrush effect</li> <li>• Using a blend to create an animation</li> <li>• Using a blend to evenly distribute objects</li> </ul> <p><b>Working with Images</b></p> <ul style="list-style-type: none"> <li>• Placing images</li> <li>• Using the Links panel</li> <li>• The Edit Original workflow</li> <li>• Live Trace</li> <li>• Rasterizing artwork</li> <li>• Object mosaic</li> </ul>



Week no.	Theory	Practical
	<p><b>Performing Specialized Tasks</b></p> <p><b>Saving and Printing</b></p> <p><b>Working with Other Programs</b></p>	<ul style="list-style-type: none"> <li>• Creating graphs</li> <li>• Creating a lens flare</li> <li>• Using Gradient Mesh</li> <li>• Using Envelope Warps</li> <li>• Using the Liquify Distortion tools</li> <li>• Saving your Graphics Editing Tool document</li> <li>• Printing your Graphics Editing Tool document</li> <li>• Using the Crop Area tool</li> <li>• Setting up page tiling</li> <li>• Adding XMP metadata</li> </ul> <p><b>Exporting Programs</b></p> <ul style="list-style-type: none"> <li>• Exporting files for use in QuarkXPress</li> <li>• Exporting files for use in InDesign</li> <li>• Exporting files for use in Word/Excel/PowerPoint</li> <li>• Exporting files for use in Image Editing Tool</li> <li>• Exporting files for use in Authoring Tool</li> <li>• Exporting files for use in Special effect Tool</li> </ul>
13 to 20	<p><b><u>Digital Photography</u></b> <b><u>Implementation of Scanner</u></b></p> <p><b><u>Image Editing Techniques</u></b> <b><u>Fundamental concepts</u></b></p> <p><b>Basic techniques</b></p> <p><b>Retouching techniques</b></p>	<p><b><u>Digital Photography (photo session)</u></b> <b><u>Scanning images</u></b></p> <p><b>Tools to be Used : Adobe Photoshop</b> <b><u>Image Editing Techniques</u></b></p> <ul style="list-style-type: none"> <li>• The Image Editing Tool Workspace - navigation, the tools, palettes, arranging document windows.</li> <li>• All about pixels, resolution and colour depth.</li> <li>• Understanding and using colour modes - RGB, CMYK and Greyscale.</li> <li>• Using Bridge.</li> </ul> <p><b>Basic techniques</b></p> <ul style="list-style-type: none"> <li>• Using brushes.</li> <li>• Choosing colours.</li> <li>• Sampling colours from an image.</li> <li>• Using Pantone colours.</li> <li>• Multiple undo and taking snapshots using the History palette.</li> <li>• Cropping and rotating images.</li> <li>• Changing image size and resolution.</li> </ul> <p><b>Retouching</b></p> <ul style="list-style-type: none"> <li>• Fixing images using the Clone Stamp</li> </ul>

Week no.	Theory	Practical
	<p><b>Selection techniques</b></p> <p><b>Composition and design techniques</b></p> <p><b>Colour correction</b></p> <p><b>Working with type</b></p> <p><b>Effects and Filters</b></p> <p><b>Production</b></p>	<p>tool and the Healing tools.</p> <ul style="list-style-type: none"> <li>• The History brush.</li> <li>• The Red-Eye and Colour Replacement tools.</li> </ul> <p><b>Selection techniques</b></p> <ul style="list-style-type: none"> <li>• The Marquee and the Lasso tools.</li> <li>• The Magic wand tool.</li> <li>• The Quick Selection tool.</li> <li>• Working in Quick Mask mode.</li> <li>• Adding and Subtracting selections.</li> <li>• Saving a selection.</li> </ul> <p><b>Composition and design techniques</b></p> <ul style="list-style-type: none"> <li>• Working with layers - moving content to new layers, Opacity, Transforming layers.</li> <li>• Creating reflections and other effects.</li> <li>• Transformations - scaling and rotating.</li> <li>• Using Colour Fill layers.</li> <li>• Using Gradients and Patterns.</li> <li>• Combining images with Layer Masks.</li> <li>• Applying a Mask to an Adjustment layer.</li> </ul> <p><b>Colour correction</b></p> <ul style="list-style-type: none"> <li>• Using the Levels command - Histograms.</li> <li>• Curves and Exposure.</li> <li>• Using the Colour Balance command to modify colour casts.</li> <li>• Adjusting Vibrance, Hue and Saturation: general and specific colour range adjustments, Colourising.</li> </ul> <p><b>Working with type</b></p> <ul style="list-style-type: none"> <li>• Working with type layers.</li> <li>• Formatting type.</li> <li>• Converting type to pixels.</li> </ul> <p><b>Effects and Filters</b></p> <ul style="list-style-type: none"> <li>• Working with Layer Styles - drop shadows, glows, bevels etc.</li> <li>• Using filters - corrective and creative filtering techniques, using the Filter Gallery.</li> </ul> <p><b>Production</b></p> <ul style="list-style-type: none"> <li>• Importing and exporting images - the mainstream file types and their uses.</li> <li>• Web graphics - using the Save For Web command - optimisation and file formats.</li> <li>• Printing - recognising non-printable colours, converting images to CMYK, saving for print</li> </ul>

Week no.	Theory	Practical
20 to 27	<p><b><u>2D Animation Techniques</u></b></p> <p><b>Tool Features</b></p> <p><b>Creating and Importing Graphic Assets</b></p> <p><b>Using Text Effectively</b></p> <p><b>Animations Techniques</b></p> <p><b>Procedure of Adding Script for Action with Script Assist and Behaviors</b></p> <p><b>Moving Clips: creation &amp; use</b></p> <p><b>Sound and Video Importing</b></p>	<p><b>Tools to be Used : Adobe Flash</b></p> <p><b>Tool Features</b></p> <ul style="list-style-type: none"> <li>• User interface</li> <li>• Image Editing Tool and Graphics Editing Tool integration</li> <li>• New drawing tools</li> <li>• 2D Script</li> <li>• 2D Script Animation</li> <li>• 2D Script Debugger</li> <li>• Authoring Tool Video Technology</li> <li>• UI componenets</li> </ul> <p><b>Creating and Importing Graphic Assets</b></p> <ul style="list-style-type: none"> <li>• Working with different graphic formats</li> <li>• Importing bitmap graphics</li> <li>• Importing vector graphics</li> <li>• Working with layers and layer folders</li> <li>• Using the drawing tools</li> <li>• Using object and merge drawing</li> <li>• Working with the Color panels</li> <li>• Creating and using Graphic symbols</li> <li>• Using the Library panel</li> </ul> <p><b>Using Text Effectively</b></p> <ul style="list-style-type: none"> <li>• Using the Text tool</li> <li>• Adding and formatting static text</li> <li>• Changing font rendering methods</li> <li>• Adding input text fields</li> <li>• Embedding fonts in input text fields</li> <li>• Using font best practices</li> </ul> <p><b>Creating Animations</b></p> <ul style="list-style-type: none"> <li>• Working with the Timeline</li> <li>• Using keyframes, blank keyframes, and frames</li> <li>• Creating motion tweens</li> <li>• Creating shape tweens</li> <li>• Creating transition effects</li> <li>• Using animation best practices</li> </ul> <p><b>Adding Action Script</b></p> <ul style="list-style-type: none"> <li>• Using Script Assist</li> <li>• Adding actions to a frame</li> <li>• Creating and using Button symbols</li> <li>• Adding behaviors to a button</li> <li>• Loading external SWFs</li> </ul> <p><b>Using Moving Clips</b></p> <ul style="list-style-type: none"> <li>• Creating and using Movie Clip symbols</li> <li>• Organizing a Movie Clip Timeline</li> <li>• Using actions to control a Timeline</li> <li>• Using frame labels</li> <li>• Responding to user interactions</li> </ul> <p><b>Adding Sound and Video</b></p> <ul style="list-style-type: none"> <li>• Importing sound</li> </ul>

Week no.	Theory	Practical
	<p><b>Publishing Authoring Tool Documents</b></p>	<ul style="list-style-type: none"> <li>• Changing sound properties</li> <li>• Adding sound to a Timeline</li> <li>• Embedding video in a Timeline</li> <li>• Using the FLV Playback component</li> </ul> <p><b>Publishing Authoring Tool Documents</b></p> <ul style="list-style-type: none"> <li>• Using different publishing formats</li> <li>• Using publishing profiles</li> <li>• Adding Authoring Tool Player detection</li> <li>• Publishing for deployment</li> </ul>
<p>28 to 35</p>	<p><b><u>3D Animation Techniques</u></b></p> <p><b>Fundamentals &amp; concepts</b></p> <p><b>User Interface</b></p> <p><b>Modeling</b></p> <p><b>Lighting / Rendering</b></p>	<p><b>Tools to be Used : Maya or 3ds MAX</b></p> <p><b>Fundamentals &amp; concepts</b></p> <ul style="list-style-type: none"> <li>• Understanding Projects and Scenes</li> <li>• Transform Tool Basics</li> <li>• Pivot Points</li> <li>• Grouping and Parenting</li> <li>• Modelling with Primitives</li> </ul> <p><b>User Interface</b></p> <ul style="list-style-type: none"> <li>• Setting up Project</li> <li>• Views / Panels</li> <li>• Hotbox</li> <li>• Viewing Geometry</li> <li>• Channel Box</li> <li>• Layer Box</li> <li>• Attributes Editor</li> <li>• QWERTY Navigation</li> <li>• Working with the Camera</li> <li>• Over view of MEL</li> <li>• Outliner / Hypergraph</li> <li>• Grouping / Parenting</li> <li>• Shelf</li> <li>• Marking Menus</li> </ul> <p><b>Modeling</b></p> <ul style="list-style-type: none"> <li>• Curve Tools / Snapping</li> <li>• Revolving</li> <li>• History</li> <li>• Duplicating</li> <li>• Working with NURBS</li> <li>• Detaching Surfaces</li> <li>• Grouping / Duplicating</li> <li>• Working with Polygons</li> <li>• Combining Polygons</li> <li>• Subdivisional surfaces</li> <li>• Split Polygon Tool</li> <li>• Lofting</li> <li>• Extruding</li> </ul> <p><b>Lighting / Rendering</b></p> <ul style="list-style-type: none"> <li>• Hypershade</li> </ul>





Week no.	Theory	Practical
	<b>Creating a Sequence</b>	<b>Creating a Sequence</b> <ul style="list-style-type: none"> <li>• Editing Methods</li> <li>• In and Out Points</li> <li>• Sub clips</li> <li>• Source and Target Tracks</li> <li>• Overlay and insert Edits</li> <li>• Adding Clips by Dragging</li> <li>• 3 and 4 point Edits</li> <li>• Lift and Extract</li> <li>• Storyboard Editing</li> <li>• Multiple and nested Sequences</li> </ul>
	<b>Editing in the Timeline</b>	<b>Editing in the Timeline</b> <ul style="list-style-type: none"> <li>• The Time Ruler</li> <li>• Adding, Deleting and Renaming Tracks</li> <li>• Markers</li> <li>• Selecting</li> <li>• Splitting Clips</li> <li>• Speed, Duration and Reverse</li> <li>• Multicam Editing</li> <li>• Synchronising Clips</li> <li>• Replace Clips</li> </ul>
	<b>Refining the Sequence</b>	<b>Refining the Sequence</b> <ul style="list-style-type: none"> <li>• Snapping</li> <li>• Trimming Methods</li> <li>• Trimming Clips</li> <li>• Ripple, Roll, Slip and Slide Edits</li> <li>• The Trim Panel</li> <li>• Split Edits (L and J Cuts)</li> </ul>
	<b>Transitions</b>	<b>Transitions</b> <ul style="list-style-type: none"> <li>• The Effects Panel</li> <li>• Understanding Transitions</li> <li>• Applying a Transition</li> <li>• Editing a Transition</li> </ul>
	<b>Audio</b>	<b>Audio</b> <ul style="list-style-type: none"> <li>• The Audio Mixer</li> <li>• Recording with the Audio Mixer</li> <li>• Fading Panning and Balancing</li> <li>• Effects</li> <li>• Corrective Measures</li> <li>• Routing Tracks</li> </ul>
	<b>Titles</b>	<b>Titles</b> <ul style="list-style-type: none"> <li>• Creating a Title</li> <li>• Text paths</li> <li>• Roll and Crawl Titles</li> <li>• Text configuration</li> </ul>





**Requirement of Tools & Equipments**  
**(for 20 trainees)**

Sl. No.	Item	Qty. /Licenses	Remarks
1.	Desktop computers loaded with latest versions of Microsoft Operating System	20+1 (Network Connected With 1 server)	Intel Quad Core Processor @ 3.0 Ghz or better Intel original chipset 2 GB RAM Suitable Graphics Card 500 GB SATA Hard Disk 17" Monitor, Headphone, Speaker, DVD-Writer, MM/kb, Optical mouse
2	UPS	@ 650VA per computer Total 21 or equivalent centralized UPS	Back up 1 hour per Computer
3.	Scanner	1 no.	Flatbed, ADF Optical resolution upto 600 dpi Bit depth: 48 internal, 24 external
4.	Digital Still SLR Camera	1 no.	Latest features
5.	Digital Video Camera	1 no.	Latest features & flash memory
6.	<b>Software</b> Microsoft Office Flash & Advanced Scripting Photoshop Illustrator Maya / 3ds MAX Sound Forge Adobe Studio Suite (Education License) After Effects Antivirus	As per requirements As per requirements As per requirements As per requirements As per requirements As per requirements As per requirements As per requirements Server version	Latest version Latest version Latest version Latest version Latest version Latest version Latest version Latest version
7.	DLP Projector	2 nos.	Resolution : 1600x1200 Multimedia Support
8.	Tripod, Green Screen & Basic Lighting Equipment, etc.	As per requirements	
9.	Non Linear Editing Set up	1 no.	
10.	Digital paint Tablet	5 nos	6" x4"
11.	White Screen	1 no.	
12.	Colour Laser Printer	1 no.	Upto 17 ppm USB interface
13.	Broadband internet connectivity		
14.	Training material on DVDs		
15.	Class room chairs & Tables Computer Lab Chairs & Tables	As per requirements	
16.	A/c 1.5 TR		3 nos