

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, Director	C.S.T.A.R.I., Kolkata	Chairman
2.	Mr. Pulakesh Goswami, Sys. Administrator	WEBEL- DQE Animation Academy, Kolkata	Member
3.	Ms. Srimati Mukerjee, Centre Head	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, Director	Jadavpur University, School of Edu. Technology, Kolkata.	Member
7.	Mr. Arup Chattopadhyay, Systems Manager	DOEACC Society, Kolkata Centre, JU Campus	Member
8.	Mr. R. Debnath, ADIT	Directorate of Indl. Trg., Govt. WB, Kolkata	Member
9	Mr. Srikanta Bhowmik, Zonal Academic Head	MAAC, Kolkata	Member
10.	Mr. Sudipta Seal, Zonal Manager	MAAC, Kolkata	Member
11.	Mr. Atanu Choudhury, General Manager	Aesthetic Technologies Karmyog Foundation,	Member
12.	Mr. Sourabh J. Sarkar, Founder & CEO	Aesthetic Technologies Karmyog Foundation,	Member
13.	Ms. Soma Banerjee, Executive Creative Resources	SEARS Communication Pvt. Ltd. Kolkata	Member
14.	Mr. Sudhriti Roy, Asstt. Manager	SEARS Communication Pvt. Ltd. Kolkata	Member
15.	Mr. T. K. Hazra, Faculty Member	Bengal Indl. Training Centre. Kolkata	Member
16.	Ms. Sreemoyee Chatterjee, Centre Head	Indian Institute of Digital Art & Animation, Kolkata	Member
17.	Mr. Sujay Kumar Bagchi, 3D Faculty	Indian Institute of Digital Art & Animation, Kolkata	Member
18.	Mr. Arghya Roy, 2D Faculty	Indian Institute of Digital Art & Animation, Kolkata	Member
19.	Mr. Tapan Kumar Chakraborty, Faculty Member	Roopkala Kendra, Kolkata	Member
20.	Mr. Anupam Dasgupta, Content Management	Aesthetic Technologies, Kolkata	Member
21.	Mr. Santanu Mukherjee, Media Head	Aesthetic Technologies, Kolkata	Member
22.	Mr. Pavel Shee, Supervisor	ANI WAY, Barrackpore, 24-Pgs(N),WB.	Member
23.	Shri Anil Kumar, Joint Director	C.S.T.A.R.I., Kolkata	Member
24.	Shri M. C. Sharma, Joint Director	C.S.T.A.R.I., Kolkata	Member
25.	Shri L.K. Mukherjee, Deputy Director	C.S.T.A.R.I., Kolkata	Member
26.	Mr. N. Nath, Asstt. Director	C.S.T.A.R.I., Kolkata	Member
27.	Mr. S. B. Sardar, Asstt. Director	C.S.T.A.R.I., Kolkata	Member
28.	Mr. R. N Manna, Trg. Officer	C.S.T.A.R.I., Kolkata	Member
29.	Mr. Prasoon Kumar Ghosh, SDM	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	Theory	Practical
no.		
1 – 4	Basic computer & graphic skills	
	Introduction to Computing	Familiarization with computer and its accessories.
	Introduction to Computers	
	Classification of computers based on size,	Contanting in the state of
	purpose and	Customization with desktop.
	• operation	
	Anatomy of computers	
	Number systems used in computers	,
	• Input and output devices	
	Block diagram of CPU	
	Operating system software	
	• DOS	
	Working with DOS Commands	
	• Windows	
	• Basics	
	• Accessories	
	File Manager and Program Manager	
	Programming language A Company of the Company	
	• Utility Software	
	Safety and occupational health: Cramped room and ill-light working environment	
	damage the eye sight and develop stress	
	symptoms.	,
	Proper sitting posture.	
	Proper lifting of posture of heavy monitor,	•
	computer, printer and other office machineries may cause back pain.	
	When direct physical telephone line is used for	
	internet connection make sure it is being detached	
	whenever there is thundering.	
	Environment:	
	Pollution of environment due to e-waste like junk	
	key board, components of computer and other	
	office machineries	
	Waste recovery facility through inter industry	
	exchange.	
		Tools to be Used . MC Office
	Word Processing	Tools to be Used: MS Office MS Office
	Introduction to Word Processing	Preparation of a document using different
	Editing a Document	toolbar.
	 Move and Copy Text and Help System 	Creating objects using drawing toolbar
	Formatting Text and Paragraph	with shading, filling colour, grouping and
	Finding and Replacing Text and Spell Checking	placed in order. Creating artistic page

Week	Theory	Practical
no.	Theory	Fractical
4	Using Tabs	border.
	Enhancing Document	
	Columns, Tables and Other Features	·
İ	Using Graphics, Templates and Wizards	·
	Using Mail Merge	MS Excel
	Miscellaneous features of Word	Preparation of different charts using same
	Spread Sheet	data and with multiple data.
	Introduction to Spreadsheet	
	Creating Worksheets & feeding data Using	Formatting data series, filling effects in
	functions	charts. Changing orientation & style of
	Editing Cells and Using commands and functions	data labels and values of chart.
	Moving and Copying, Inserting and Deleting	
	Rows and Columns	
	Formatting a Worksheet	
	Opening, Saving and Printing a Worksheet	
	Working with Charts	
	Working with Macros	NAC Dame Date
	Presentation	MS Power Point
	Creating Presentations using AutoContent	Preparation of a presentation containing
	Wizard, Template & Blank Presentation	own profile
	Working with Master's Slide, Title handout and	
	Notes	·
	Viewing a Presentation	
	Drawing Objects & Inserting OLE	
	 Drawing reeform shapes 	κ.
	Rotating Objects	
	Coordinate Systems	
	• 2-D coordinated system	
	• 3-D coordinated system	,
	Concept of	
	Polygon and Mesh	
	Perspective Projection	Submission of Project Proposal
	Concept of Multimedia	Creating of project proposal in Power
	Methodology & Process of Multimedia	Point Presentation
	Project Management	
	Concept of Web Technology	
5 - 12	Graphics Editing	1
	Traditional Design	Tools to be Used: Adobe Illustrator
	Traditional and digital applications of color, concept	
	and composition.	
	Drawing 1	Drawing 1
		Fundamental techniques of drawing in
		pencil, charcoal, and ink. Emphasis is
		on realistic representation and visual
		observation.
	Drawing 2	Drawing 2
	Diaming #	Advanced concepts of drawing.
		Emphasis is on design and

Color Theory Principles and techniques for the perception and effective use of color in all media. Includes work with values, neutrals, basic color schemes. Painting Materials and techniques of painting. Subject matter includes still life, landscape and figurative studies. Emphasis is on individual development and response to the media. Illustration Techniques An introduction to various illustrational styles, techniques and media used in the creation of pictorial illustration as applied to commercial art. Graphics Editing Techniques Introduction Creating Graphics Editing Tool Documents The Graphics Editing Tool Interface Basic Drawing Basic Drawing Color Theory Painting Still life, landscape and figurative studies. Illustration Techniques Creation of pictorial illustration as applied to commercial art. Graphics Editing Techniques - Use of Graphics Editing Tool. Knowledge about vector graphics. Understanding paths - Fill and stroke attributes - Selections and stacking order Editing Graphics - The Welcome screen - Important document settings - Exploring panels and workspaces - Using the control panel - Navigating within a document - Using guides and grids - Utilizing the bounding box - Using smart guides - Choosing preview options - Drawing with the Pen tool	Week	Theory	Practical
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Drawing with the Pen tool			
• Drawing with the Pencil tool			Drawing with the Pen tool
			• Drawing with the Pencil tool
Basic Path Editing • Painting with the Paintbrush tool Editing		Rasia Dath Editing	9
Basic Path Editing • Creating compound shapes		Dasic I ath Editing	
 Utilizing pathfinder functions 			
• Using the Eraser tool			
Joining and averaging paths			Joining and averaging paths
Outlining strokes			•
• Simplifying paths		Pagia Toyt Editing	
Basic Text Editing • Creating point text		Dasic 16xt Editing	
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Week no.	Theory	Practical
Hot	· · · · · · · · · · · · · · · · · · ·	Creating area text
-	The second secon	Applying basic character settings
-	·	Applying basic paragraph settings
	· ·	• Creating text threads
		Creating text on a path
	·	Converting text to outlines
	Making Selections	Use of Selection Tool
		Using the basic selection tools
		Using the Magic Wand and the Lasso tool
		Selecting objects by attribute
		Saving and reusing selections
	Understanding Appearances	Appearances
		Targeting object attributes
		Adding multiple attributes
		Applying live effects
		Expanding appearances
		Creating graphic styles
		Modifying graphic styles
		Appearance palette settings
		 Copying appearance
	Working with Groups and Layers	Working with Groups and Layers
	•	 Defining groups
		Editing groups
		Working with layers
i		Layers and object hierarchy
		Creating template layers
		Object, group, and layer attributes
	Advanced Drawing and Path Editing	Advanced Drawing and Editing Path
	•	Creating Live Paint groups
		Detecting gaps in Live Paint groups
٠.		Path editing with Live Paint
		Using Offset Path
		Dividing an object into a grid
	Working with Color	Cleaning up errant paths
	,	Working with Color
		Defining swatches
		Creating swatch groups and libraries
		Working with gradients
		Working with patterns Heim the Color Coid
		Using the Color Guide Francisco action with color.
		Experimenting with color Finding colors with buller
	·	Finding colors with kuler Modifying color in artivorts
	Object Transformation and Positioning	Modifying color in artwork Transformation and Positioning
	Object Transion mation and Tositioning	Transformation and Positioning Rotating and scaling objects
		Reflecting and skewing objects
	·	 We recting and skewing objects Using the Free Transform tool
		 Using the Transform panel
.]		Aligning objects
		 Distributing objects
		- Distributing Objects

Week	Theory	Practical
no.		
	Use of Brushes	Using Brushes
		Creating a calligraphic brush
		Creating a scatter brush
		Creating an art brush
		Creating a pattern brush
	Use of Masks	Working with Masks
		Understanding clipping masks
		Using layer clipping masks
		Creating opacity masks
	Use of Symbols	Using Symbols
		Defining symbols
		Editing symbols
		Using the Symbolism toolset
	Application of Filters and Live Effects	Applying Filters and Live Effects
		Minding your resolution settings
		Mapping artwork to 3D objects
		Using the Transform effect
	i	Using the Pathfinder effects
		Using the Stylize effects
		Using the Scribble effect
		Using the Warp effect
	Advanced Text Editing	Advanced Text Editing
		Taking advantage of OpenType fonts
		Using the Glyphs panel
		Wrapping text around objects
		Checking spelling
		Using the Change Case function
		Setting tabs and leaders
		Managing fonts
		Dealing with legacy text
	Designing for the Web	Web Designing
		Using Pixel Preview
		Specifying web slicing
		Optimizing web graphics
		Creating simple animations
	Creation of Blends	Creating Blends
		Creating a basic blend
	·	Using a blend to create an airbrush
	,	effect
		Using a blend to create an animation
		Using a blend to evenly distribute
		objects
	Working with Images	Working with Images
	,	Placing images
	·	Using the Links panel
		The Edit Original workflow
		Live Trace
		Rasterizing artwork
	·	Object mosaic
	•	,

Week	Theory	Practical
no.		
	Performing Specialized Tasks	 Creating graphs Creating a lens flare
		Using Gradient Mesh
		Using Envelope Warps
		Using the Liquify Distortion tools
		a sound and and a sound a sound
	Saving and Printing	Saving your Graphics Editing Tool document
		Printing your Graphics Editing Tool
	·	document
		• Using the Crop Area tool
		Setting up page tiling
		Adding XMP metadata
		- Mudnig Mill Metadata
	Working with Other Programs	Exporting Programs
	Working with other Fregrams	• Exporting files for use in QuarkXPress
		• Exporting files for use in InDesign
		• Exporting files for use in
		Word/Excel/PowerPoint
		• Exporting files for use in Image Editing
-		Tool
		• Exporting files for use in Authoring
		Tool
		• Exporting files for use in Special effect
		Tool
13 to	Digital Photography	Digital Photography (photo session)
20	Implementation of Scanner	Scanning images
	Image Editing Techniques	Tools to be Used: Adobe Photoshop
	Fundamental concepts	Image Editing Techniques
		• The Image Editing Tool Workspace -
	'	navigation, the tools, palettes, arranging
		document windows.
	·	• All about pixels, resolution and colour
		depth.
		• Understanding and using colour modes -
	·	RGB, CMYK and Greyscale.
		• Using Bridge.
	Basic techniques	Basic techniques
		• Using brushes.
		• Choosing colours.
		• Sampling colours from an image.
1		Using Pantone colours. Multiple under and taking grandets.
		Multiple undo and taking snapshots
		using the History palette.
		• Cropping and rotating images.
	Deterophing techniques	• Changing image size and resolution.
	Retouching techniques	Retouching
<u> </u>		• Fixing images using the Clone Stamp

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Week	Theory	Practical
20 to	2D Animation Techniques	Tools to be Used: Adobe Flash
27	Tool Features	 Tool Features User interface Image Editing Tool and Graphics Editing Tool integration New drawing tools 2D Script
	Creating and Importing Graphic Assets	 2D Script 2D Script Animation 2D Script Debugger Authoring Tool Video Technology UI components Creating and Importing Graphic Assets
	Creating and Importing Graphic Assets	 Working with different graphic formats Importing bitmap graphics Importing vector graphics Working with layers and layer folders
		 Using object and merge drawing Working with the Color panels Creating and using Graphic symbols Using the Library panel
	Using Text Effectively	 Using Text Effectively Using the Text tool Adding and formatting static text Changing font rendering methods Adding input text fields Embedding fonts in input text fields
	Animations Techniques	 Using font best practices Creating Animations Working with the Timeline Using keyframes, blank keyframes, and frames Creating motion tweens Creating shape tweens Creating transition effects
	Procedure of Adding Script for Action with Script Assist and Behaviors	 Using animation best practices Adding Action Script Using Script Assist Adding actions to a frame Creating and using Button symbols Adding behaviors to a button Loading external SWFs
	Moving Clips: creation & use	 Using Moving Clips Creating and using Movie Clip symbols Organizing a Movie Clip Timeline Using actions to control a Timeline Using frame labels
	Sound and Video Importing	 Responding to user interactions Adding Sound and Video Importing sound

Week	Theory	Practical
no.		
		Changing sound properties
		Adding sound to a Timeline
		Embedding video in a Timeline
		Using the FLV Playback component
	Publishing Authoring Tool Documents	Publishing Authoring Tool Documents
		Using different publishing formats
		Using publishing profiles
	•	Adding Authoring Tool Player
		detection
,		Publishing for deployment
28 to	3D Animation Techniques	Tools to be Used: Maya or 3ds MAX
35		
	Fundamentals & concepts	Fundamentals & concepts
		Understanding Projects and Scenes
		Transform Tool Basics
	•	Pivot Points
		Grouping and Parenting
		Modelling with Primitives
	User Interface	User Interface
		Setting up Project
		Views / Panels
		Hotbox
		Viewing Geometry
		Channel Box
		Layer Box Advibutes Editors
		Attributes Editor ONERTY Novienties
	·	QWERTY Navigation Wasking with the Company
		Working with the CameraOver view of MEL
	•	Over view of MEL Outliner / Hypergraph
		• Grouping / Parenting
		• Shelf
		Marking Menus
	Modeling	Modeling
	Notening	Curve Tools / Snapping
		• Revolving
		History
		Duplicating
		Working with NURBS
		Detaching Surfaces
		Grouping / Duplicating
	,	Working with Polygons
		Combining Polygons
		Subdivisional surfaces
		Split Polygon Tool
	-	• Lofting
		Extruding
	Lighting / Rendering	Lighting / Rendering
		Hypershade

Week	Theory	Practical
no.		No. 11 A 1 264-21-
		Materials, Apply Materials
		 Making Shader Networks
		 Combining Ramps
		 Layered Textures
		 Intro to lights
		 Making Bump Maps
		 Working with Shadows
		 UV Mapping
		Moving UV's
		Specular Maps
		Paint FX
		Render View
,		Camera Settings
	·	Render Globals
		• Kender Giodais
	Character Setup & Animation	Character Setup & Animation
	Character Setup & Himmeron	The skeletons: Joints & bones
		 Rigid bind
		Smooth bind
		Connecting attributes
		Character control
		Set Driven Keys Set Driven Vey advanced
		Set Driven Key advanced
		• Deformers
		• Joints / IK Handles
		Keyframing / Time slider
		Attach to Path
		Cycle Curves
		 Playblasting
		Camera
	Dynamics	Dynamics
		Creating particles
		Particle attributes
		 Particle Goals (Crowd simulation,
	,	Fire, Smoke, Lighting effects)
		Types of Fields, applying fields
		Curve & surface emoissions
36 to	Audio Visual Techniques	Tools to be Used: Sound Forge
39	Audio Capturing Basics	
		Sound Recording / Capturing
	Audio Editing Basics	
	Sound editing basics	Various formats of sound files
	Various formats of sound files	Converting analog audio to digital
	Converting analog audio to digital audio	audio
	Wiles Conturing Posis	Digital audio editor – including
	Video Capturing Basic	
	Video shooting techniques	powerful audio processing tools
	Handling Camera	Effects for recording and magnipulating
	Capturing Footage	audio
	Device Control Settings	

Week	Theory	Practical
no.		
	Capturing Audio and Video DV, HDV and HD	Edit files nondestructively down to the sample level with extreme speed and
	• Importing Stills, Still Sequences, Image Editing Tool Files, with Bridge,	accuracy.
	Projects • On-Location overview	
40 to	Video Capturing & Editing Techniques	
43	Basics	Tools to be Used: Adobe Premier
	• Setting up the System	Project Project settings
	Starting A Project	Preference settings Asset Management
		• Sequences & Clips
		Offline On-line Clips
	Capturing & Importing Footage	Capturing & Importing Footage • Capturing Footage
		Device Control Settings
		Capturing Audio and Video
		• DV, HDV and HD
	•	• Importing Stills, Still Sequences,
		Image Editing Tool Files, with Bridge,
		Projects
	•	On-Location overview
	Managing Clips	Managing Clips
		The Project Panel
	; ;	• Views
		• The preview area
		Organising Clips in Bins
		Duplicating and Copying Clips
		Renaming Clips
	,	• Finding Clips (search function)
		• Interpreting Footage
		Unlinking and Re-linking Media
		The Project Manager
	The Monitor Panels	The Monitor Panels
		Viewing Clips
		Playback Controls
		• Audio Clips
		• Cuing Clips
		• Time Ruler Controls
		• Safe Zones
		• Display Mode
		• Waveform and Vectorscope Options
		• The Reference Monitor
		Ganging source and Program Monitors

Week no.	Theory	Practical
110.	Creating a Sequence	Creating a Sequence • Editing Methods • In and Out Points • Sub clips • Source and Target Tracks • Overlay and insert Edits • Adding Clips by Dragging • 3 and 4 point Edits • Lift and Extract • Storyboard Editing • Multiple and nested Sequences
	Editing in the Timeline	Editing in the Timeline The Time Ruler Adding, Deleting and Renaming Tracks Markers Selecting Splitting Clips Speed, Duration and Reverse Multicam Editing Synchronising Clips Replace Clips
	Refining the Sequence	Refining the Sequence • Snapping • Trimming Methods • Trimming Clips • Ripple, Roll, Slip and Slide Edits • The Trim Panel • Split Edits (L and J Cuts)
	Transitions	 Transitions The Effects Panel Understanding Transitions Applying a Transition Editing a Transition
	Audio	Audio • The Audio Mixer • Recording with the Audio Mixer • Fading Panning and Balancing • Effects • Corrective Measures • Routing Tracks
	Titles	Titles

We		Theory	Practical
no	J.	Effects	Effects
		Litets	• Effect Types
			• Effect Properties
			• The Effects Control Panel
		· .	• Key framing
		and the second s	Motion Effects
			Opacity and Volume
			• Lighting Effects
			• Timewarp (pixel motion Blending)
			• Special effect Tool and Premiere
			Special effect 1001 and 11emiere
		Output	Output
		•	Creating DVDs
			• Blu-Ray
			SWF and FLV Files
			Media Encoder
			DVD Markers
			Using Clip Notes
	to	Special effect Techniques	Tools to be Used: Adobe After Effects
47		Introduction	
		User interface	Practical assignment related to theory.
		Creating and using compositions	
		Keyfaming and using time line	
		Looping animation	
		Editing motion path	
		Creating the arrivals Bound Effects	
		Simulation between Authoring Tool & Special	
	İ	effect Tool	
		Applying filter effects and mask to components	
		Animate 3D transformations	<i>;</i>
		Include a common loop sound	
		Use of simple scripting in Special effect Tool	
		Rotoscoping, Chroma, 2D & 3D tracing, Green/	
		Blue screen technique/ shooting.	
		Colour Correction	
18	40	Authoring & Integration	Ducingt & Assistant
+(1)	w	Authoring & Integration	Project & Assignment
	1		
51			

Requirement of Tools & Equipments (for 20 trainees)

1. Desktop computers loaded with latest versions of Microsoft Operating System System 20-1 (Network Connected With 1 server) 20-2 (20-2 (20-2) (20	SI.	Item	Qnty. /Licenses	Remarks
2 UPS UPS @ 650VA per computer Total 21 or equivalent centralized UPS 3. Scanner 1 no. Digital Still SLR Camera 1 no. Digital Video Camera 5. Digital Video Camera 6. Software Microsoft Office Flash & Advanced Scripting Photoshop Illustrator Maya / 3ds MAX Sound Forge Adobe Studio Suite (Education License) After Effects Antivirus 7. DLP Projector 7. DLP Projector 8. Tripod, Green Screen & Basic Lighting Equipment, etc. 9. Non Linear Editing Set up 1 no. 17" Monitor, Headphone, Speaker, DVD-Writer, MM/kb, Optical mouse Back up 1 hour per Computer Computer Total 21 or equivalent centralized UPS Back up 1 hour per Computer Sack up 1 h		versions of Microsoft Operating	Connected With 1	better Intel original chipset 2 GB RAM Suitable Graphics Card
computer Total 21 or equivalent centralized UPS 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 Microsoft Office Flash & Advanced Scripting Photoshop As per requirements Hllustrator As per requirements Maya / 3ds MAX As per requirements As per requirements As per requirements Latest version Lopidal version Latest versio				17" Monitor, Headphone, Speaker,
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. Software Microsoft Office As per requirements Latest version Flash & Advanced Scripting As per requirements Latest version Photoshop As per requirements Latest version Illustrator As per requirements Latest version Maya / 3ds MAX As per requirements Latest version As per requirements Latest version As per requirements Latest version As per requirements Latest version As per requirements Latest version As per requirements Latest version As per requirements Latest version Latest version Latest version Latest version Latest version Latest version Latest version Latest version As per requirements Latest version Latest version Latest version Latest version As per requirements Latest version Latest version Latest version As per requirements Latest version Latest version Latest version As per requirements Latest version 7. DLP Projector 2 nos. Resolution: 1600x1200 Multimedia Support 8. Tripod, Green Screen & Basic Lighting Equipment, etc. 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. 13. Broadband internet connectivity 14. Training material on DVDs 15. Class room chairs & Tables Computer Lab Chairs & Tables Computer Lab Chairs & Tables	2	UPS	computer Total 21 or equivalent	Back up 1 hour per Computer
5. Digital Video Camera 1 no. Latest features & flash memory 6. Software Microsoft Office As per requirements Latest version Flash & Advanced Scripting As per requirements Latest version Photoshop As per requirements Latest version Illustrator As per requirements Latest version Maya / 3ds MAX As per requirements Latest version Maya / 3ds MAX As per requirements Latest version Adobe Studio Suite (Education License) After Effects As per requirements Latest version After Effects As per requirements Latest version 7. DLP Projector 2 nos. Resolution : 1600x1200 Multimedia Support 8. Tripod, Green Screen & Basic Lighting Equipment, etc. 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 Computer Lab Chairs & Tables Computer Lab Chairs & Tables	3.	Scanner	1 no.	Optical resolution upto 600 dpi
6. Software Microsoft Office Flash & Advanced Scripting Photoshop As per requirements Illustrator As per requirements Maya / 3ds MAX As per requirements As per requirements As per requirements Latest version Latest v	4.	Digital Still SLR Camera	1 no.	Latest features
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