



कौशल बलम्

SYLLABUS FOR THE TRADE OF

# MULTIMEDIA, ANIMATION & SPECIAL EFFECTS

(SEMESTER PATTERN)

Under  
CRAFTSMAN TRAINING SCHEME  
SECTOR – IT & ITES

Designed in : 2014

Government of India  
Ministry of Labour & Employment  
D.G.E. & T

### General Information

1. Name of the Trade : Multimedia, Animation & Special Effects
2. N.C.O. Code No. : 3231.20, 2452.70
3. Entry Qualification : Passed 10<sup>th</sup> Standard under 10+2 System
4. Duration of Course : One Year
5. Power Norms : 6 KW
6. Space Norms : 80 Sq. m Lab & 50 Sq. m. Studio  
(Workshop and Class Room)
7. Unit Strength : 20 Trainees
8. Instructors' Qualification : **Degree in Multimedia and Animation from recognized university with one year working experience in the relevant field OR Diploma in Multimedia and Animation with 2 years working experience in the relevant field OR NAC or NTC holder in Multimedia Animation & Special Effects trade with three years experience and National Craft Instructor Training Certificate (if available)**

**Job Role :** After completion of this training the trainee can get jobs in any photo studio, can become entrepreneur in photographer/videographer, can get job in advertising agency, in media entertainment and also in film industry.

**Objectives : After completion of the course the trainee able to**

- Take photographs and videos using Digital Camera
- Make special effects in photos and videos
- Make audio and video movies with multimedia effects
- Make animation and special effects

# Syllabus for MULTIMEDIA, ANIMATION & SPECIAL EFFECTS

Semester: I

Duration: 6 Months

Week No.	Trade Practical	Trade Theory
1-2	<p><u>Introduction to Computers</u> Connecting of power supply to computer and its peripherals Demonstration of various parts of computer system such as mother board, RAM, CPU, serial and parallel ports</p> <p><u>MS Windows</u> Using desktop, task bar, start button, title bar, menus and windows help. My computer &amp; recycle bin. Creating, deleting and renaming of files, folders &amp; short cuts. Opening &amp; closing of different windows. Using different windows at a time. Moving through windows and mouse, maximize/minimize windows, use of help feature, exit windows, starting an application and closing application. File management through windows explorer-select files and directories, copy, move, delete files/directories. Expand compressed directories and files. Open and manage multiple director windows. View and sort files, creating and renaming files/directories, disk operation using file manager. Using essential accessories-notepad, word pad, paint brush, calculators, calendar, character map, system tools,</p>	<p><u>Introduction to Computers</u> Basic Definition, hardware, software, Block Diagram of Computer system I/O devices and its application Switching and shutting down the computer, Features and functions of Operating systems, different types of operating systems.</p> <p>MS Windows Different versions, advantages and application of windows. Starting windows and their operations. File Management through Windows explorer. Introduction and applications of Accessories such as notepad, word pad, paint brush, calculators, calendar, character map, system tools, entertainment, Multimedia and windows media player and sounds. Application of control panel Zipping and unzipping Introduction to Linux</p>

	entertainment, Using Multimedia and windows media player and sounds. Using control panel Zipping and unzipping Introduction Linux – Practicing of linux commands	
3	<u>Software Installation</u> Practice on Installation of Windows XP, 7 and 8, Linux Installation of MS Office, Libre Office, Open source and utilities, remote control, chat, voice and video, Live CD Operations Installation of Photoshop, Illustrator Flash, Maya and 3 DS Max	Different configurations of Computer system and its peripherals, Compatible with different hardware/software <u>Software Installation</u> – Pre-installation - Prerequisites, Install procedure, Rollback or Un-install procedure, Tests. Post-installation – Backup procedure & specifications, Restore procedure, Periodical view check Awareness of IT –Act 2000, its Amendments and Phenomena (T-5) <input type="checkbox"/> Provisions of act <input type="checkbox"/> Types of offences, fines, imprisonment <input type="checkbox"/> Cyber Crime, Cyber Law Awareness of legal aspects of using computers such as copyright, patent etc.
4-5	<u>Internet</u> Operations browsing, downloading messages, pictures from internet, sending and receiving emails, sending attachments of pictures and text information, E-chatting. Setting of internal Modem and External modem connecting telephone lines through dial-up, ISDN and broadband connections. Testing and trouble shooting of Modem Operating of Routers Security Implementations Troubleshooting of internet connection. Shearing Internet connection through LAN to other computers Operating WiFi access points/modems,	<u>Internet</u> Operations and applications of internet. Setting of modem, connecting dial up connecting ISDN and Broadband connections, DTMF telephone system. Testing and troubleshooting of Modem Routers WiFi, Blue Tooth and VPN Implementation Introduction to Data Centers and applications Introduction to Cloud computing

	<p>setting up of blue tooth and data sharing with mobiles</p> <p>Creating simple VPN implementation</p> <p>Visit to NIC/other Data centers</p>	
6	<p>Microsoft WORD</p> <p>Open, resize and close MS WORD. Opening, edit and save/ "save as" documents.</p> <p>Use all menu bar features. Use all Standard tool bar features.</p> <p>Create Document, non-documents files. Create templates. Create tables. Insert pictures and videos.</p> <p>Mail merge documents. Creating Bookmarks.</p> <p>Add Bullets and numbering. Create Hyperlinks. Create brochures. Create book work</p>	<p>Microsoft WORD</p> <p>Text editing software's. Introduction to MS Office. Features and application of Microsoft word. Concept of word processing. Menu bar features. Standard tool bar features. Editing the text, use of different tools, formatting the text. Creating, Document, non-documents files. Creating templates. Creating tables.</p> <p>Inserting pictures and videos. Mail merge. Book marks</p> <p>Bullets and numbering. Hyperlinks. Creating brochures. Creating bookwork.</p>
7	<p><b><u>Microsoft EXCEL</u></b></p> <p>Practice Excel - creating various worksheets, mathematical calculations, using different formulae, Preparing various types of Graphs/charts, different Chart options, colouring, etc. Practice on Sorting and Filtering Printing worksheet</p>	<p><b>Application of spread sheet</b></p> <p>Advantages of MS Excel, Use of Microsoft Excel features for creating worksheets with mathematical formulae and graphs.</p>
8	<p><b><u>Micro Soft Power Point</u></b></p> <p>Creating slides, designing slides, back ground, layout styles, special effects Editing text, adding/deleting aligning, making bold, italic and fonts, colour text. Changing back ground colours and designs</p> <p>Creating auto shapes, drawing clip art, word art, smart art, charts, tables, text boxes, images, shading and 3-d effect</p>	<p>Introduction to some of the most common graphics and image file formats, and its restrictions to particular hardware/operating system platforms.</p> <p>Platform independent formats. Image formats and incorporation of compression technique for large storage size of Image files.</p> <p>Know the difference between Vector Graphics and Raster Graphics.</p> <p>Know the difference between Screen Graphics</p>

	<p>Rotating text and pictures, text wrapping, saving, quitting and printing slides</p> <p>Inserting new slides, making animation effects</p> <p>Inserting hyperlinks between files.</p> <p>Viewing the slides, slide transition, making sound effects, inserting movie/sound from external files</p> <p>Grouping and ungrouping the objects.</p>	<p>and Pixel Graphics.</p> <p>Understand the following formats :- ai, pdf, eps, svg, svgz, psd, bmp, gif, jpg, pcx, pct, png, raw, sct, tga, tiff, vst.</p>
9-12	<p>Digital Photography (photo session)</p> <p>Scanning images</p> <p>Tools to be Used: Adobe Photoshop</p> <p>Image Editing Techniques</p> <ul style="list-style-type: none"> <li>· The image Editing tool</li> </ul> <p>Workspace-navigation, the tools, palettes, arranging document windows.</p> <ul style="list-style-type: none"> <li>· All about pixels, resolution, and color Depth.</li> <li>· Understanding and using color modes- RGB, CMYK and Grayscale.</li> <li>· Using Bridge.</li> </ul> <p>Basic techniques</p> <ul style="list-style-type: none"> <li>· Using brushes.</li> <li>· Choosing colors</li> <li>· Sampling colors from an image.</li> <li>· Using Pantone colors.</li> <li>· Multiple undo and taking snapshots</li> </ul> <p>Using the History palette.</p> <ul style="list-style-type: none"> <li>· Cropping and rotating images.</li> <li>· Changing image size and resolution.</li> </ul> <p>Retouching</p> <p>Fixing images using the Clone Stamp</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>Selection techniques</p> <ul style="list-style-type: none"> <li>· The marquee and the lasso tools.</li> </ul>	<p>Digital photography</p> <p>Implementation of Scanner</p> <p>Image Editing techniques</p> <p>Fundamental concepts</p> <p>Basic techniques</p> <p>Retouching techniques</p> <p>Selection technique</p> <p>Composition and design techniques</p> <p>Colour correction</p> <p>Working with type</p> <p>Effects and Filters</p> <p>Production</p>

- The quick selection tool.
- Working in quick mask mode
- Adding and subtracting selections.
- Saving a selection.

Composition and design techniques

- Working with layers-moving content to new layer ,opacity, Transforming layers.
- Creating reflection and other effects.
- Transformation-Scaling and rotating.
- Using colour fill layers
- Using gradients and patterns.
- Combing images with layer masks
- Applying a Mask to an Adjustments layer.

Colour correction

- Using the levels command histogram.
- Curves and exposure
- Using the color balance command to modify colour casts.
- Adjusting vibrance, Hue and Saturation: general and specific color range adjustment, colourising.

Working with type

- Working with type layers
- Formatting type
- Converting type to pixels

Effects and Filters

- Working with layers Styles-Drop shadows, glows, bevels etc.
- Using filters-corrective and creative filtering technique, using the filter gallery

Production

- Importing and Exporting images the main stream file types and their uses.
- Web graphics-Using the Save for Web command-Optimization and file formats



	<ul style="list-style-type: none"> <li>· Printing- recognizing nonprintable colors, converting images to CMYK, saving for print</li> <li>· 3d (Menu),</li> <li>· Color Correction(Adjustments),Smart Objects, Content Aware, Puppet Wrap</li> <li>Define (Brush, Pattern, Custom Shape)</li> <li>· Preferences, Masking ( Layer, Vector , Clipping, Channel),Video Layers ,Filters (All)</li> <li>· Actions (Panel),Animation, Channels</li> <li>· Text (Character/Paragraph(Panels)),Using Bridge</li> </ul>	
13-15	<p><b><u>Working with Images in Photoshop.</u></b></p> <p>Working with Palettes, i.e., layers palette, navigator palette, info palette, color palette, Swatches palette, Styles palette, History palette, Actions Palette, Tool preset palette, Channels Palette and Path Palette.</p> <p>Working with Layers.</p> <p>Photo editing.</p> <p>Image adjustment options – Labels, Auto labels, Auto contrasts, Curves, Color balance, Brightness / Contrast, Posterize , Variations.</p> <p>Preparing the file and work area.</p> <p>Creating different shapes.</p> <p>Creating three Dimensional effects using Layers.</p> <p>Working with the magic wand tool and lasso tool.</p> <p>Creating images using Symbol Sprayer Tool.</p> <p>Edit the images using options of Warp</p>	<p><b><u>Introduction to Photoshop</u></b></p> <p>In depth Image editing.</p> <p>Exploring new creative options and producing high quality images for print &amp; web.</p> <p>Creating exceptional imagery with easier access to file streamlined web design.</p> <p>Photo re-touching, colorful image collages, artistic backgrounds.</p> <p>Creation of the optimized images with roll over effects and image mapping.</p> <p>Special effects on images using</p>

	<p>Tool.</p> <p>Using Dodge tool, Burn tool, Sponge Tool and Clone Stamp Tool.</p> <p>Editing Selections.</p> <p>Creating images and giving special effects using Filters.</p> <p>Using Layer Styles.</p> <p>Produce an image by mixing two or more different</p>	
16-18	<p>Tools to be Used : Adobe Illustrator</p> <p>Drawing 1</p> <p>Fundamental techniques of drawing in pencil, charcoal and ink. Emphasis is on realistic representation and visual observation.</p> <p>Drawing 2</p> <p>Advanced concept of drawing. Emphasis is on design and composition and experimental techniques in different media</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>Use of selection Tool</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>Appearances</p> <p>Targeting objects attributes</p> <ul style="list-style-type: none"> <li>· Adding multiple attributes</li> <li>· Applying live effects</li> <li>· Expanding appearances</li> <li>· Creating graphic styles</li> </ul> <p>Modifying graphic styles</p> <ul style="list-style-type: none"> <li>· Appearance palette settings</li> <li>· Copying appearance</li> </ul>	<p>Graphics Editing</p> <p>Traditional Design</p> <p>Traditional and digital applications of color, concept and composition.</p> <p>Drawing 1</p> <p>Drawing 2</p> <p>Making Selections</p> <p>Understanding Appearances</p> <p>Working with Groups and Layers</p> <p>Advanced Drawing and Path Editing</p> <p>Working with Color</p> <p>Object Transformation and Positioning</p> <p>Use of Brushes</p> <p>Use of Masks</p> <p>Use of Symbols</p> <p>Application of Filters and Live Effects</p> <p>Advanced Text Editing</p> <p>Designing for the Web</p> <p>Creation of Blends</p> <p>Working with Images</p> <p>Performing Specialized Tasks</p> <p>Saving and printing</p> <p>Working with Other programs</p>

## Working with Groups and Layers

- Defining groups
- Editing groups
- Working with Layers
- Layers and object hierarchy
- Creating template layers
- Object, group, and layer attributes

## Advanced Drawing and Editing Path

- Creating Live Paint groups
- Detecting gaps in Live Paint groups
- Path editing with Live Paint
- Using Offset Path
- Dividing an object into a grid
- Cleaning up errant paths

## Working with Color

- Defining swatches
- Creating swatch groups and libraries
- Working with gradients
- Working with patterns
- Using the Color Guide
- Experimenting with color
- Finding colors with kuler
- Modifying color in artwork

## Transformation and Positioning

- Rotating and scaling objects
- Reflecting and skewing objects
- Using the free Transform panel
- Aligning objects

## Distributing objects

## Using Brushes

- Creating a calligraphic brush
- Creating a scatter brush
- Creating an art brush
- Creating a pattern brush

## Working with Masks

- Understanding clipping masks
- Using layer clipping masks
- Creating opacity masks

## Using Symbols

- Defining symbols
- Editing symbols
- Using the symbolism toolset

## Applying Filters and Live Effects

	<ul style="list-style-type: none"> <li>· Minding your resolution settings</li> <li>· Mapping artwork to 3Dobjects</li> <li>· Using the Transform effect</li> </ul> <p>Using the pathfinder effects</p> <ul style="list-style-type: none"> <li>· Using the Stylize effect</li> <li>· Using the Scribble effect</li> <li>· Using the Warp effect</li> </ul> <p>Advanced Text Editing</p> <ul style="list-style-type: none"> <li>· Taking advantage of Open type fonts</li> <li>· Using the Glyphs panel</li> <li>· Wrapping text around objects</li> <li>· Checking spelling</li> <li>· Using the change cash function</li> <li>· Setting tabs and leaders</li> <li>· Managing fonts</li> <li>· Dealing with legacy text</li> </ul> <p>Web Designing</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>Creating Blends</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</li> </ul> <p>Working with Images</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 Creating graphs</li> <li>· Creating a lens flare</li> <li>· Using gradient Mesh</li> <li>· Using Envelope Warps</li> <li>· Using the Liquefy distortion tools</li> <li>· Saving your Graphics Editing Tool Document</li> <li>· Printing your Graphics Editing</li> </ul>	
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	<p>Tool</p> <p>Document</p> <ul style="list-style-type: none"> <li>· Using the Crop Area tools</li> <li>· Setting up page tiling</li> </ul> <p>Adding XMP metadata</p> <p>Exporting programs</p> <ul style="list-style-type: none"> <li>· Exporting files for use in QuarkXPress</li> </ul> <p>Exporting files for use in In Design</p> <ul style="list-style-type: none"> <li>· Exporting files for use in Word/excel/PowerPoint</li> <li>· Exporting files for use in image</li> </ul> <p>Editing Tool</p> <ul style="list-style-type: none"> <li>· Exporting files for use in</li> </ul> <p>Authoring Tool</p> <ul style="list-style-type: none"> <li>· Exporting files for use in Special effects Tool</li> <li>· Effects (Ps-Ai)</li> <li>· Preferences</li> </ul>	
19-21	<p><u>Video Graphy</u></p> <p>Introduction to video camera</p> <p>Practicing the craft of filmmaking, Learning camera anatomy</p> <p>Practicing important settings of camera</p> <p>Practice on focusing using tools and auto focus</p> <p>Practice on Shooting with shallow depth of field</p> <p>Practice on using neutral density (ND) filters to correct overexposure</p> <p>Practice on gain to artificially brighten an underexposed shot</p> <p>Practice on Choosing the right shutter speed</p> <p>Practice on color temperature, White balancing a shot</p> <p>Practice on Choosing the right tripod</p> <p>Practice on camera moves and Mastering hand-held shooting</p> <p>Practice on Audio Essentials</p> <ul style="list-style-type: none"> <li>- For Five sound rules to live by</li> </ul>	<p>Introduction to video camera</p> <p>Introducing the subject for the video shoot</p> <p>Getting Started in Video</p> <p>Learning the craft of filmmaking Exploring types of video cameras</p> <p>Knowing what to look for in a camera</p> <p>Camera Essentials</p> <p>Learning camera anatomy</p> <p>Exploring important camera settings</p> <p>Understanding how to focus</p> <p>Using tools to achieve better focus</p> <p>Knowing when to use auto focus</p> <p>Shooting with shallow depth of field</p> <p>Understanding exposure</p> <p>Using neutral density (ND) filters to correct overexposure</p> <p>Using gain to artificially brighten an underexposed shot</p> <p>Choosing the right shutter speed</p> <p>Understanding color temperature</p> <p>White balancing a shot</p> <p>Moving the Camera</p>

	<ul style="list-style-type: none"> <li>- Using the types of microphones for video shooting</li> <li>- Setting up microphones for a video shoot</li> <li>- Using a boom microphone</li> <li>- Setting proper audio levels</li> </ul> <p>Practicing the lighting essential</p> <ul style="list-style-type: none"> <li>- Working with lighting instruments</li> <li>- Understanding lighting concepts</li> <li>- Creating a four-point lighting setup for a scene</li> <li>- Using corrective gels</li> </ul>	<p>Choosing the right tripod  Understanding camera moves  Mastering hand-held shooting</p> <p>Audio Essentials  Five sound rules to live by  Understanding the types of microphones for video shooting  Setting up microphones for a video shoot  Using a boom microphone  Setting proper audio levels</p> <p>Lighting Essentials  Working with lighting instruments  Understanding lighting concepts  Creating a four-point lighting setup for a scene  Using corrective gels</p>
22-23	<b>Project Work / Industrial Visits</b>	
24-25	<b>Examinations</b>	
26	<b>Admission for the next session</b>	

**Semester : II****Duration : 6 Months**

<b>Week No.</b>	<b>Practical</b>	<b>Theory</b>
1-2	<p>Introduction to Front Page</p> <p>Creating Background Pictures</p> <p>Creating Tables - Adding and Deleting Rows, Columns, and Cells</p> <p>Background Colors</p> <p>Practicing Picture Manipulation - Transparent, Alt Representation Text Tags, Rotating, Thumbnails, Picture Gallery</p> <p>Practicing Hyperlinks - To 'Outside'/External Sites, Internal Link, Bookmark, Email Addresses, Rollover Styles, Target Frames</p> <p>Practice on Marquees</p> <p>Practice on Forms - Search Page, Inserting a Form, One Line Text Box, Option Button, Check Box, Text Area, Drop Down Box, Confirmation Pages</p> <p>Practice on Sample Forms Page, Date and Time Stamp, Counter, Page Transitions, Changing your Password</p> <p>Practice on - Themes, Banners, Buttons, Headings, Hyperlinks/Bullets/Horizontal Lines, Navigation Bars</p> <p>Practice on creating Frames, Shared Borders</p> <p>Practice on Scheduling a Web Page or Picture to Appear</p>	<p>Introduction to Front Page</p> <p>Background Pictures</p> <p>Tables - Adding and Deleting Rows, Columns, and Cells</p> <p>Background Colors</p> <p>Picture Manipulation - Transparent, Alt Representation Text Tags, Rotating, Thumbnails, Picture Gallery</p> <p>Hyperlinks - To 'Outside'/External Sites, Internal Link, Bookmark, Email Addresses, Rollover Styles, Target Frames</p> <p>Marquees</p> <p>Forms - Search Page, Inserting a Form, One Line Text Box, Option Button, Check Box, Text Area, Drop Down Box, Confirmation Pages</p> <p>Sample Forms Page, Date and Time Stamp, Counter, Page Transitions, Changing your Password</p> <p>Themes, Banners, Buttons, Headings, Hyperlinks/Bullets/Horizontal Lines, Navigation Bars</p> <p>Frames, Shared Borders</p> <p>Scheduling a Web Page or Picture to Appear</p>
3-4	<p>Practice on Image Streaming</p> <p>Practice on Internet merge,</p> <p>Practice on Youtube creation</p> <p>Practice on Transferring files from Camera</p>	<p>Image Streaming</p> <p>Internet merge, Youtube creation</p> <p>Transferring files from Camera to Computer</p> <p>Hosting on web site</p>

	to Computer Practice on Hosting on web site	
5	<p><b><u>Overview of Information Security</u></b></p> <p>Video show on Information Security</p> <p><b><u>Overview of Security threats</u></b></p> <p>Video show on Security Threats Mock test on security threats</p> <p><b>Information Security Vulnerabilities</b></p> <p>Video show on Security Vulnerabilities</p> <p><b><u>Risk Management</u></b></p> <p>Video show on Risk Management Mock test on Risk Management</p>	<p><b><u>Overview of Information Security</u></b></p> <p>Understanding Information Security - Need of the Information security, Basics of IS (CIA) , History and evolution of IS, Dimensions of Information Security, Intranet/Internet, Information Security and Cyber Security relationship</p> <p>Why Care About Security? - Challenges to Information Security</p> <p>Benefits of Information of Security</p> <p>Understanding techniques to enforce IS in an organization</p> <p>Identifying tools to enforce Information Security</p> <p>Identifying frameworks to enforce Information Security</p> <p><b><u>Overview of Security threats</u></b></p> <p>Overview of Information Security Threats</p> <p>Types of threats – DDoS, Malicious codes, Espionage, etc</p> <p>Identification of Threats - Probing of threats, Scanning of threats, Modus Operandi, Sources of Threats, External threats , Internal threats , Best Practices or Guidelines used to Identify Threats - Conduct regular education and awareness trainings for employees and third parties, Best Practices or Guidelines used in mitigation of threats, Deploying up to date technology, Maintaining Systems and Procedures, Educating Users, Conducting regular education and awareness trainings for employees and third parties</p> <p>Collaborate with peers and experts through different forums to understand contemporary issues and solutions</p> <p><b>Information Security Vulnerabilities</b></p> <p>Why do Information Security Vulnerabilities exists - Types of Technical Vulnerabilities, Types of Native Vulnerabilities, Understanding Security Vulnerabilities, Flaws in Software or Protocol Designs, Weaknesses</p>



		<p>in How Protocols and Software Are Implemented, Weaknesses in System and Network Configurations, Weaknesses in Web or Cloud applications, Weaknesses in Online e-transactions, Browser Security and Role of cookies and pop-ups, Security holes in Browser, Web Applications, OS, and Smart phones, Identifying role of Social sites and media in cyber security and vulnerability Understanding Vulnerability Assessment Tools and Techniques , Techniques to Exploit Vulnerabilities, Techniques to Fix the Vulnerabilities, Identify security vulnerabilities on a regular basis using requisite tools and processes.</p> <p>How to fix the security gaps and holes, Identifying liabilities of service providers, software vendors, Software authors, system owners, and third parties</p> <p>Best Practices and Guidelines to mitigate security Vulnerabilities</p> <p><b><u>Risk Management</u></b></p> <p>What is Risk?</p> <p>Relationship between Threat, Vulnerability, and Risk</p> <p>What Is the Value of an Asset?</p> <p>What Is a Threat Source/Agent?</p> <p>Examples of Some Vulnerabilities that Are Not Always Obvious</p> <p>What Is a Control?</p> <p>What Is Risk Likelihood and consequences?</p> <p>What Is Impact?</p> <p>Control Effectiveness</p> <p>Risk Management</p> <p>Purpose of Risk Management</p> <p>Risk Assessment (Phases)</p> <p>Why Is Risk Assessment Difficult?</p> <p>Types of Risk Assessment</p> <p>Different Approaches to Risk Analysis</p> <p>Best Practices and Guidelines in Assessing and Calculating Risks</p> <p>Develop and implement policies and procedures to mitigate risks arising from ICT</p>
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		supply chain and outsourcing. Best Practices and Guidelines in Mitigating Risk
6-8	<p><u>Tools to be Used : Adobe Premier Project</u></p> <p>Project settings</p> <ul style="list-style-type: none"> <li>· Preference settings</li> <li>· Asset Management</li> <li>· Sequences &amp; Clips</li> <li>· Offline On-line Clips</li> </ul> <p>Managing Clips</p> <ul style="list-style-type: none"> <li>· The Project panel</li> <li>· Views</li> <li>· The preview area</li> <li>· Organizing clips and bins</li> <li>· Duplicating and copying clips</li> <li>· Renaming clips</li> <li>· Finding clips(search function)</li> <li>· Interpreting Footage</li> <li>· Unlinking and Re-linking Media</li> <li>· The Project Manager</li> </ul> <p>The Monitor Panels</p> <ul style="list-style-type: none"> <li>· Viewing Clips</li> <li>· Playback Controls</li> <li>· Audio Clips</li> <li>· Cuing Clips</li> <li>· Time Ruler Controls</li> <li>· Safe Zones</li> <li>· Display Mode</li> <li>· Wave form and Vectorscope</li> </ul> <p>Options</p> <ul style="list-style-type: none"> <li>· The Reference Monitor</li> <li>· Ganging source and Program</li> </ul> <p>Monitor</p> <p>Creating a Sequence</p> <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> </ul>	<p>Introduction to Adobe Premier Project</p> <p>Creating a Sequence</p> <p>Editing in the Timeline</p> <p>Refining the sequence</p> <p>Transitions</p> <p>Audio</p> <p>Tiles</p> <p>Effects</p> <p>Output</p>

- Storyboard Editing
- Multiple And Nested Sequences
- Editing in the Timeline
- The Time Ruler
- Adding, Deleting and Renaming Tracks
- Markers
- Selecting
- Splitting Clips
- Speed, Duration and Reverse
- Multicam Editing
- Synchronizing Clips
- Replace Clips
- Refining the sequence
- Snapping
- Trimming Methods
- Trimming Clips
- Ripple , Roll, Slip And Slide Edits
- The Trim Panel
- Split Edits (L And J Cuts)
- Transitions
- The Effects Panel
- Understanding Transitions
- Applying A Transitions
- Editing A Transitions
- Audio
- The audio mixer
- Recording with the audio mixer
- Fading panning and balancing
- Effects
- Corrective measures
- Routing tracks
- Titles
- Creating a title
- Text paths
- Roll and crawl titles
- Text configuration
- Effects
- Effect Types
- Effect Properties
- The Effects Control Panel
- Key framing
- Motion Effects

	<ul style="list-style-type: none"> <li>· Opacity and Volume</li> <li>· Lighting Effects</li> <li>· Timewarp (pixel motion Blending)</li> <li>· Special effect Tool and Premiere Output</li> <li>· Creating DVDs</li> <li>· Blu-Ray</li> <li>· SWF and FLV Files</li> </ul> <p>Media Encoder</p> <ul style="list-style-type: none"> <li>· DVD Makers</li> <li>· Using Clip Notes</li> </ul>	
9-10	<p><u>Introduction to Adobe After Effects</u></p> <p>Practice on User interface</p> <p>Creating and using compositions</p> <p>Practice on Key framing and using time line</p> <p>Practice on Looping animation</p> <p>Practice on Editing motion path</p> <p>Creating the arrivals Bound Effects</p> <p>Simulation between Authoring Tool &amp; Special effects Tool</p> <p>Applying filter effects and mask to components</p> <p>Practice on Animate 3D transformations</p> <p>Include a common loop sound</p> <p>Practice on simple scripting in special effect Tool</p> <p>Rotoscoping, Chroma, 2D &amp; 3D tracing, Green/Blue screen technique/shooting. Colour Correction</p>	<p><u>Introduction to Adobe After Effects</u></p> <p>Special effect Techniques</p> <p>Introduction</p> <p>User interface</p> <p>Creating and using compositions</p> <p>Key framing and using time line</p> <p>Looping animation</p> <p>Editing motion path</p> <p>Creating the arrivals Bound Effects</p> <p>Simulation between Authoring Tool &amp; Special effects Tool</p> <p>Applying filter effects and mask to components</p> <p>Animate 3D transformations</p> <p>Include a common loop sound</p> <p>Use of simple scripting in special effect Tool</p> <p>Rotoscoping, Chroma, 2D &amp; 3D tracing, Green/Blue screen technique/shooting. Colour Correction</p>
11-13	<p><u>Introduction to Flash</u></p> <p>Practice on Tool Features, User interface, Image Editing Tool and Graphics, Editing Tool integration, Authoring Tool Video Technology, UI components</p> <p>Practice on Creating and Importing Graphics Assets, Working with different graphic</p> <p>Practice on formats - Importing bitmap graphics, Working with layers and layer folder, Using the drawing tools, Using object and merge drawing, Working with the color panels, Creating and using Graphic symbols,</p>	<p><u>Introduction to Flash</u></p> <p>About Flash and General overview – Stage and Work area of Flash, using guides, grid &amp; rulers.</p> <p>Using frames and key frames, Working with time line.</p> <p>Using layers – to create a layer, to create a layer folder, to show or hide a layer or folder, to view the contents of the layer as outlines, to change the layer height in the timeline, to change the order of the layers or folders.</p> <p>Using Guide layers.</p>

	<p>Using the Library panel Practice on Text Effectively- Text tool, Adding and formatting static text, Changing font rendering methods, Adding input text fields, Embedding fonts in input text fields, Using for best practices Practice on Creation of Animations - Working with the timeline, Using key frames, blanks key frames and frames, Creating motion tweens, Creating shape tweens, Creating transition effects, Using animation best practices Practice on Basic Action Script - Using Script Assist, Adding actions to a frame, Creating and using Button symbols</p>	<p>Drawing in Flash – to raw with a pencil tool, to paint with a brush tool, to draw with pen tool. Using colors in Flash, to use a gradient fill. Importing Artwork, Video and Audio. Different file formats in Video &amp; Audio. Flash Compatible Audio &amp; Video file formats</p>
14-17	<p>Introduction to 3ds MAX Practice on creating projects and Scenes  Practice on Transform tool basics, Pivot points, Grouping and parenting, Modeling with primitives Practice on User Interface - Setting up project, Views/panels, Hotbox, Viewing Geometry, Channel Box, Layer Box, Attributes Editor, QWERTY Navigation, Working with the camera, Over view of MEL, Outliner/ Hyper graph, Grouping / parenting Shelf Marking Menus  Practice on Modeling – Curve Tools/snapping, Revolving, History, Duplicating, Working with NURBS, Detaching surfaces, Grouping/Duplicating, Working with polygons, Subdivisional surfaces, Split polygon Tool, Lofting, Extruding Practice on MODELING Practice on POLYGON TOOLS Practice on WITH PROXY Practice on NORMALS, Lighting /Rendering Practice on Hyper shade, Materials, Apply Materials, Making Shader Networks,</p>	<p>Introduction to 3ds Max 3D Animation Techniques Fundamentals &amp; concepts User Interface  Modeling Lighting /Rending Character Setup &amp; Animation Dynamics</p>

	Combining Ramps, Layered Textures, Intro to lights, Making Bump Maps, Working with Shadows, UV Mapping, Specular Maps, Paints FX, Render View, Camera Settings, Render Globals, TOON SHADER	
18-21	<p><u>Introduction to MAYA</u></p> <p>Practice on navigation with view port, view port menu, forms and grids, selecting objects, move rotate and scale, manipulating pivote, channel box, attributed editor, Marking menu</p> <p>Practice on Polygon modeling : Ploygon components, soft selection, extrude tools, extruding curves, polygon vevels, subdivide surface, character body,</p> <p>Practice on NURBS Modeling NURBS primitive NURBS carv tools, Text creations, NURBS revolve, NURBS loft, NURBS extrude, NURBS planner</p> <p>Practice on Organising Maya scene, out liner, group object, hierarchies, duplicating objects, hypergraph, hide/show object, players</p> <p>Practice on using Materials</p> <p>Render Material, basics of material, applying of maps, BIP map picture, hyper shade, mental ray material, bump mapping, ramp shader, 3d paint tools</p> <p>Animation, time line animation, adjusting key, editing key, graph editor, dope sheet, break down keys, path animation, play blast, constrains, animation cycles, adding sound.</p> <p>Practice on Rendering Lights, depth map shadow, raterace shadows, basics of camera, depth of field, mental ray, software rendering, reflection and refraction, IPR rendering, lighting to</p>	<p><u>Introduction to maya</u></p> <p>Navigating with view port, view port menu, forms and grids, selecting objects, move rotate and scale, manipulating pivote, channel box, attributed editor, Marking menu</p> <p>Polygon modeling : Ploygon components, soft selection, extrude tools, extruding curves, polygon vevels, subdivide surface, character body,</p> <p>NURBS Modeling Introduction to NURBS, NURBS primitive NURBS carv tools, Text creations, NURBS revolve, NURBS loft, NURBS extrude, NURBS planner</p> <p>Organising Maya scene, out liner, group object, hierarchies, duplicating objects, hypergraph, hide/show object, players</p> <p>Materials</p> <p>Render Material, basics of material, applying of maps, BIP map picture, hyper shade, mental ray material, bump mapping, ramp shader, 3d paint tools</p> <p>Animation, time line animation, adjusting key, editing key, graph editor, dope sheet, break down keys, path animation, play blast, constrains, animation cycles, adding sound.</p> <p>Rendering Lights, depth map shadow, raterace shadows, basics of camera, depth of field, mental ray, software rendering, reflection and refraction,</p>

	scene, Batch rendering	IPR rendering, lighting to scene Batch rendering
22-23	<b>Project Work / Industrial Visits</b>	
24-25	<b>Examinations</b>	
26	<b>Admission for the next session</b>	

**Tool & Equipment for a batch of 20 trainees**

<b>Sl. No.</b>	<b>Name of the items</b>	<b>Quantity</b>
1	Server for LAN – As Required. Latest 32/64 bit processor or Higher with PCI Express Video Card 4GB VRAM 4 GB RAM expandable 19" TFT Keyboard, Mouse, DVD OR BLU-RAY WRITER with latest Paper license of OS – Server Edition Internet, Antivirus / Total Security – Server Edition & UPS for Power Back up.	1 No.
2	WORKSTATION FOR MULTIMEDIA i700 (i7) PROCESSOR or Quad core or Higher 8 GB RAM 1 Terabyte HDD 22" TFT Monitor DVD OR BLU-RAY WRITER KEYBOARD/INTERNET USB Optical Mouse, USB Keyboard with latest license of OS	2 Nos.
3	WORKSTATION/NODES : 2 <sup>nd</sup> Generation Core i3 Processor or Equivalent and above with major minimum features as below : 1) 32/64 Bit Processor (3.06 GHz or Higher, 4 MB 4-Core) or Higher. 2) Network Card : Integrated Gigabit Ethernet(10/100/1000). 3) RAM : 2 GB/ 4 GB DDR3 or Higher. 4) 320 GB / 500 GB HDD or Higher. 5) 19" TFT Monitor / Higher 6) DVD Writer 7) PS2 / USB KeyBoard , USB/Optical Mouse with latest Paper Licensed Operating System / OEM Pack(Preloaded) Professional/Ultimate Edition with Internet Facility.	10 Nos.
4	500 VA or higher off – line UPS FOR NODES	13 Nos.
5	COLOUR LASER PRINTER	1 No.
6	Network MONOCHROME LASER PRINTER	1 No.

7	OPTICAL SCANNER (DESK TOP TYPE)	1 No.
8	WEB CAM (DIGITAL CAMERA)	1 No.
9	DVD OR BLU-RAY WRITER	2 Nos.
10	Standalone HARD DISKS	4 Nos.
11	Network Interface Card (Ethernet Card 10/100/1000 Mbps)	4 Nos.
12	Fire extinguisher	1 No.
13	Vacuum Cleaner (For IT & ITES Sector)	1 No.
14	LCD / DLP projector	1 No.
15	24 port Switch /Router	1 Each
16	500 VA or higher off – line UPS FOR NODES and server	11 Nos.
17	Air Conditioner 1.5 ton	3 Nos.
18	Modem (Internal & External)	2 Nos.
19	Broad Band connection	1 No.
20	Telephone Line	1 No.
21	CD / DVD Writer 2 nos.	2 Nos.
22	Room temperature thermometer	1 No.
23	Scanner	1 No.
24	Digital Still SLR Camera	1 No.
25	Digital Video Camera	1 No.
<b><u>SOFTWARE</u></b>		
1	Windows XP/vista/8 Network Support with 10 User license professional/academic edition	1 No.
2	MS Office latest version / Open Office 10 user license professional/academic edition (along with MS access and MS Front page)	1 No.
3	Anti Virus Latest version/ Total Security software with (10 User License)	1 No.
4	Adobe Photoshop (academic edition with 10 user license)	1 No.
5	3D STUDIO Max (academic edition with 10 user license)	1 No.
6	Maya (academic edition with 10 user license)	1 No.
7	Adobe Flash (academic edition with 10 user license)	1 No.
8	Adobe premier Suite (academic edition with 10 user license)	1 No.
9	Front Page Editor (Academic edition with 10 user license)	1 No.
<b><u>FURNITURE</u></b>		
1	Computer Tables	11 Nos.
2	Printer Tables	3 Nos.
3	Instructor Table	1 No.
4	Instructor's Chair	1 No.
5	Straight back revolving & adjustable chairs (Computer Chairs )	20 Nos.
6	Steel cupboards drawer type	3 Nos.
7	Cabinet with drawer	2 Nos.



8	Pigeon hole cabinet -16 compartments	1 No.
9	Steel almirah big size	1 No
10	Steel almirah small size	2 Nos.
11	Class room chairs with writing pad moulded type	20 Nos.
<b><u>Trainee Tool Kit</u></b>		
1	Screwdriver Set of min. 5 bits (Combination of star & minus) + 1 ext. rod	1 Set
2	Crimping Tool for BNC and RJ-45 connectors	1 No. Each
3	Punching Tool	1 No.

**Note : 1. All Software should be Network Version**

**2. Some of Course Related CBTs can be purchased (Optional)**

NOTE- LATEST VERSION OF HARDWARE AND SOFTWARE should be provided.

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