



GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP
DIRECTORATE GENERAL OF TRAINING

COMPETENCY BASED CURRICULUM

CERTIFICATE COURSE ON

2D ANIMATOR



NSQF LEVEL- 4

SECTOR : MEDIA AND ENTERTAINMENT

2D ANIMATOR

Duration: 600 Hours

NSQF LEVEL - 4

(Version: 1.0)

Designed in 2020

Developed By

Ministry of Skill Development and Entrepreneurship

Directorate General of Training

Sectoral Trade Course Committee of Media and Entertainment Sector

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1. COURSE INFORMATION

1.1 GENERAL

During the 600 hours duration of 2D Animator course a candidate is trained on professional skills & knowledge related to job role. In addition to this a candidate is entrusted to undertake project work and extracurricular activities to build up confidence. The Broad components covered during the course are given below:

The duration of the course is 600 hours under short term course of STCC. During the course, the theory and practical related to concepts of 2D Animation, Drawing Concept, Color Theory and Basics, Methods of Incorporating sound into 2D animation, Basic of Sketching, Still life and assignment of basic drawing , Composition of basic elements, Work in different media, such as drawing, collage and painting, Explore the relationship between elements and principle of layout and designing, Pixel Resolution: Vector and Bitmap Graphics, Creating Digital layout & image editing related broadcasting design, Character design & Image composing, Working with flash and animate, Creating Graphics and motion animation, Advanced 2D Animation Techniques, Painting & Animating techniques, Understanding Background Composition, 2D Animation Techniques, 2D Animation for portfolio during production and post-production of animation.

1.2 PROGRESSION PATHWAYS

- Can join in Media and Entertainment sector as Multi Media Artist and Animator and will progress further as 3D Animator, Animation Director, Art Director and can rise up to the level of Designer/ Director.
- Can become Entrepreneur in the related field.

1.3 COURSE STRUCTURE

Table below depicts the distribution of training hours across various course elements during a period of 600 hours: -

| S No. | Course Element | Notional Training Hours |
|-------|---------------------------------------|-------------------------|
| 1. | Professional Skill (Trade Practical) | 450 |
| 2. | Professional Knowledge (Trade Theory) | 150 |
| | Total | 600 |

1.4 ASSESSMENT & CERTIFICATION

The trainee will be tested for his skill, knowledge and attitude during the period of course through formative assessment and at the end of the training programme through summative assessment as notified by the DGT from time to time.

a) The Continuous Assessment (Internal) during the period of training will be done by Formative Assessment Method by testing for assessment criteria listed against learning outcomes. The training institute has to maintain an individual trainee portfolio as detailed in assessment guideline.

b) The pattern and marking structure is being notified by DGT from time to time. The learning outcome and assessment criteria will be the basis for setting question papers for final assessment.

c) Assessment will be evidence based comprising the following:

- Job carried out in labs/workshop/Field
- Answer sheet of assessment
- Viva-voce
- Participation and punctuality

Evidences of internal assessments are to be preserved until forthcoming Block examination for audit and verification by examining body.

d) The minimum pass percentage for skill test is 60%.

2. JOB ROLE

Brief description of Job roles:

Multi-Media Artists and Animators; create special effects, animation, or other visual images using film, video, computers, or other electronic tools and media for use in products or creations, such as computer games, movies, music videos, and commercials. Apply story development, directing, cinematography, and editing to animation to create storyboards that show the flow of the animation and map out key scenes and characters. Assemble, typeset, scan and produce digital camera ready art or film negatives and printer's proofs. Convert real objects to animated objects through modelling, using techniques such as optical scanning. Create and install special effects as required by the script, mixing chemicals and fabricating needed parts from wood, metal, plaster, and clay. Create basic designs, drawings, and illustrations for product labels, cartoons, direct mail, or television. Create pen-and-paper images to be scanned, edited, coloured, textured or animated by computer. Create two dimensional and three-dimensional images depicting objects in motion or illustrating a process, using computer animation or modelling programmes. Design complex graphics and animation, using independent judgment, creativity, and computer equipment. Develop briefings, brochures, multimedia presentations, web pages, promotional products, technical illustrations, and computer artwork for use in products, technical manuals, literature, newsletters and slide shows.

Also can work as 2D Animator which focuses on creating characters, backgrounds, and scene transitions, bringing creative ideas and concepts to life. Job duties of 2D animators revolve around designing and producing images; they include Producing special effects and action graphics, Creating frames and characters, Designing advertisements and websites, Inking, Coloring etc. Other job roles suitable for the course are Assistant Animator, Character Designer and Storyboard Artist.

Reference NCO-2015:

2166.0201 – Multi Media Artist and Animator/Animator

3. GENERAL INFORMATION

| | | |
|--|---|---------------------|
| Name of the Course | 2D Animator | |
| Course Code | DGT/8013 | |
| Reference NCO - 2015 | 2166.0201 | |
| NSQF Level | Level 4 | |
| Duration of Craftsmen Training | 600 Hours | |
| Entry Qualification | Passed 10 class with ITI | |
| Unit Strength (No. of Student) | 20 | |
| Space Norms | 100 Sq.m | |
| Power Norms | 3.45 KW | |
| Instructors Qualification | <p>B.Voc/Degree in Multimedia and Animation from a UGC recognised University with one year working experience in the relevant field.</p> <p style="text-align: center;">OR</p> <p>Diploma (Minimum 2 years) in Multimedia and Animation from recognized board of technical education or relevant Advanced Diploma (Vocational) from DGT with two years working experience in the relevant field.</p> <p style="text-align: center;">OR</p> <p>NTC/NAC holder in Multimedia Animation & Special Effects trade with three years working experience in the relevant field.</p> | |
| List of Tools and Equipment | As per Annexure – I | |
| Distribution of training on hourly basis: (Indicative only) | | |
| Total hours/ Week | Trade practical | Trade theory |
| 40 | 30 | 10 |

4. LEARNING OUTCOME

Learning outcomes are a reflection of total competencies of a trainee and assessment will be carried out as per the assessment criteria.

4.1 LEARNING OUTCOMES

1. Perceive 2D ANIMATION and various drawing concepts with colour theory and basics.
2. Carry out Layout and Designing with Basic of Sketching, Still life and assignment of basic drawing. Create various Compositions of basic elements, Apply Concepts of working in media, Explore the relationship between elements and principle, Pixel Resolution: Vector and Bitmap Graphics.
3. Implement Graphics and Broadcasting in DESIGN with Creating Digital layout & image editing, Character design & Image composing.
4. Create and Manage content, Website Content, Timeline in 2D Animation, Creating Graphics and motion animation, Motion in 2D Animation, Advanced 2D Animation Techniques & Action script and Behaviours.
5. Produce/Post Produce with Painting & Animating, Incorporate sound into 2D animation, perceive Background Composition, 2D Animation for Site publication.

| SYLLABUS – 2D ANIMATOR | | | |
|---|---|--|---|
| Duration: 600 Hours | | | |
| Duration | Reference Learning outcome | Professional Skills (Trade Practical) | Professional Knowledge (Trade Theory) |
| Professional skills- 60 Hrs Professional Knowledge- 20 Hrs | Perceive 2D ANIMATION and various drawing concepts with colour theory and basics. | <ol style="list-style-type: none"> Practice of Technical terms associated with Animation. (3 hrs) Identify the various types of animation. (4 hrs) Practice application of Principles of Animation. (4 hrs) Squash and Stretch, Anticipation, Staging, Straight ahead pose to pose animation, Slow in and Slow out, Arcs etc. (4 hrs) | <ul style="list-style-type: none"> Importance of 2D Animation. Role and Responsibility of Animator. Traditional. 2D, Computer Animating, Motion graphics, Stop motion. |
| | | <p>Drawing Concept</p> <ol style="list-style-type: none"> Draw Receptive and Projective Drawing. (4 hrs) Practice Casual Drawing, Preparatory drawing, Finished Drawing. (4 hrs) Draw Line drawing, Stippling, Shading. (3 hrs) Use Portraits, Landscapes, Figurative Genre Works, Still life, Illustrations, Caricatures. (3 hrs) Create shape layers and paths. (3 hrs) Practice and Familiarization with tools used in software. (4 hrs) | <ul style="list-style-type: none"> Understand the different types of art forms. Basics drawing categories. Drawing methods. Types of drawing. |
| | | <p>Color Theory and Basics</p> <ol style="list-style-type: none"> Manage color across applications. (3 hrs) | <ul style="list-style-type: none"> Know about color theory. The Color Wheel. |

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| | | <p>12. Color calibration with software and hardware tools. (4 hrs)</p> <p>13. Develop effective color palettes. (3 hrs)</p> <p>14. Perceive and practice to color vision principles. (3 hrs)</p> <p>15. Practice Interaction of colors. (4 hrs)</p> <p>16. Use Color expressions. (3 hrs)</p> <p>17. Use the Three dimensions of Color. (4 hrs)</p> | <ul style="list-style-type: none"> • Traditional Color Theory. • Understanding Color Physics. • Seeing through color opaque, translucent, and transparent. |
| <p>Professional skills - 90Hrs</p> <p>Professional Knowledge:- 30 Hrs</p> | <p>Carry out Layout and Designing with Basic of Sketching, Still life and assignment of basic drawing. Create various Composition of basic elements, Apply Concepts of working in media, Explore the relationship between elements and principle, Pixel Resolution: Vector and Bitmap Graphics.</p> | <p>Basic of Sketching, Still life and assignment of basic drawing , Composition of basic elements</p> <p>18. Practice still life drawing. (3 hrs)</p> <p>19. Assess the components of composition. (3 hrs)</p> <p>20. Practise Sketching Observation. (3 hrs)</p> <p>21. Practice Wire outline, Line of Development. (3 hrs)</p> <p>22. Apply of Points of interest, Shading methods. (3 hrs)</p> <p>23. Use Unity, Balance, Movement, Rhythm, Focus, Contrast, Pattern. (3 hrs)</p> | <ul style="list-style-type: none"> • Explain the meaning of sketching. • Terminologies in Sketching. |
| | | <p>Concepts of working in media</p> <p>24. Practice Drawing, Painting, Collage. (3 hrs)</p> <p>25. Use Dry media, Graphite, Charcoal, Pastels, wet Media, Painting. (3 hrs)</p> <p>26. Use Encaustic, Tempera, Fresco, Oil, Acrylic Paint, Watercolour. (3 hrs)</p> <p>27. Practice Washes and Glazes, Wet in Wet, Dry Brush, Diluting and Mixing. (3 hrs)</p> | <ul style="list-style-type: none"> • Describe different type of drawing media. • Explain the major theories influencing art. • Assess how to use materials. • Formal elements and safe working practices. • Differentiate between various water colour techniques. |

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| | | <p>28. Application of Mixed media techniques for collage. (3 hrs)</p> <p>Explore the relationship between elements and principle</p> <p>29. Practice Line, Scale. (3 hrs)</p> <p>30. Use of Colour, Contrast. (3 hrs)</p> <p>31. Use of Texture, Repetition. (3 hrs)</p> <p>32. Apply Negative Space, Symmetry. (3 hrs)</p> <p>33. Apply Transparency, Balance. (3 hrs)</p> <p>34. Use Hierarchy, Framing. (3 hrs)</p> <p>35. Use Grid, Randomness. (3 hrs)</p> <p>36. Practice Direction, Rules, Movement. (3 hrs)</p> <p>37. Apply and Differentiate: 'outline randomness' and different forms of randomness. (3 hrs)</p> | <ul style="list-style-type: none"> • Describe various design elements. • Division of elements. • Elaborate, design elements. • Define a line. • Discuss various grid systems. |
| | | <p>Pixel Resolution: Vector and Bitmap Graphics</p> <p>38. Practice and Application of following parameters</p> <p>39. Pixels and Resolution. (3 hrs)</p> <p>40. Megapixels. (3 hrs)</p> <p>41. Aspect Ratio. (3 hrs)</p> <p>42. True Colour. (3 hrs)</p> <p>43. Raster (Bitmap) . (3 hrs)</p> <p>44. Vector. (3 hrs) (Lines/Calculated Points)</p> <p>45. Bitmap Data. (3 hrs)</p> <p>46. Vector Data and Block. (3 hrs)</p> <p>47. Convert bitmap to vector. (3 hrs)</p> | <ul style="list-style-type: none"> • Know the theory of resolution. • Describe facts about vector and bitmap. • Elaborate the depth of pixel color and intensity. • Explain the choosing the right format. |
| Professional skills - 60Hrs Professional | Implement GRAPHICS AND BROADCASTING in DESIGN with | <p>Creating Digital layout & image editing</p> <p>48. Practice of image Editing. (5 hrs)</p> <p>49. Use Advanced Raster</p> | <ul style="list-style-type: none"> • Understand the 2D characters and environments that reflect the integration of graphic clarity, • Understand Design principles, |

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| Knowledge- 20Hrs | Creating Digital layout & image editing, Character design & Image composing. | <p>Techniques. (5 hrs)</p> <p>50. Practice of identifying Lighting and Shadow techniques. (5 hrs)</p> <p>51. Digital and Matte Painting. (3 hrs)</p> <p>52. Use Collage and Masking. (3 hrs)</p> <p>53. Working with Filters. (5 hrs)</p> <p>54. Practice of Special Effects. (3 hrs)</p> <p>55. Use Image Trapping & Crop Marks etc. (5 hrs)</p> | <p>performance principles and theoretical constructs.</p> |
| | | <p>Character design & Image composing</p> <p>56. Practice Focus on building designs from simple shapes and affects . (5 hrs)</p> <p>57. Draw clear silhouettes in design and character posing can help shape our character designs and make them stronger and more functional. (5 hrs)</p> <p>58. Design different shapes. (3 hrs)</p> <p>59. Practice design layouts and backgrounds. (5 hrs)</p> <p>60. Use techniques to bring an individual identity to a character's face. (5 hrs)</p> <p>61. Practice designing contrasting characters and placing them in a story telling moment. (5 hrs)</p> | <ul style="list-style-type: none"> • The relationship between shape and character design. • The importance of character silhouettes. • Design layouts and backgrounds that incorporate principles of composition, perspective and colour, with speed, accuracy and dexterity, using a variety of media. • Importance of shape and silhouettes to creating a unique and strong character line up. |
| <p>Professional skills - 150 Hrs</p> <p>Professional Knowledge - 50Hrs</p> | <p>Create and Manage content, Website Content, Timeline in 2D Animation, Creating Graphics and motion animation,</p> | <p>Creating and Managing content</p> <p>62. Draw & Select Simple Vector Shapes. (3 hrs)</p> <p>63. Explore Other Drawing Tools. (3 hrs)</p> <p>64. Group Objects. (3 hrs)</p> <p>65. Draw Curves with the Pen & Pencil Tools. (3 hrs)</p> | <ul style="list-style-type: none"> • Touring of Flash interface. • New Document Settings & Navigation. |

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| <p>Motion in 2D Animation, Advanced 2D Animation Techniques & Action script and Behaviours.</p> | <p>66. Interact between Shapes. (3 hrs) 67. Work in Object Drawing Mode. (3 hrs)</p> | |
| | <p>Website Content 68. Work with Layers. (3 hrs) 69. Use Bitmaps. (3 hrs) 70. Add Text. (3 hrs) 71. Use the Regular & Primitive Shape Tools to Build a Graphic. (3 hrs) 72. Create & Adjust a Symbol. (3 hrs) 73. Transform Objects with the Free Transform Tool. (3 hrs) 74. Explore Color Types & Gradients. (3 hrs)</p> | <ul style="list-style-type: none"> • Layers. • Shapes and tools to build graphics. • Symbols and objects. |
| | <p>Timeline in 2D Animation 75. Create a Span of Frames & Control the Playhead. (3 hrs) 76. Create Keyframes. (2 hrs) 77. Insert Blank Keyframes& Clear Keyframes. (3 hrs) 78. Frame-by-Frame Animation & Onion Skin. (3 hrs)</p> | <ul style="list-style-type: none"> • Timeline Basics. • Keyframes. |
| <p>Creating Graphics and motion animation 79. Practice working in 2D space. (3 hrs) 80. Use controlling color palette. (3 hrs) 81. Create stoker animations. (3 hrs) 82. Use solid layers for motion graphics.(3 hrs) 83. Get Started with Motion Presents. (3 hrs) 84. Stretch Tween Spans. (3 hrs) 85. Move Tween Spans. (3 hrs)</p> | <ul style="list-style-type: none"> • Explain of concepts like linear and ease key frames • Basics and principles of Creation an animated film. • Methods of Incorporation a range of artistic styles and techniques. | |

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| | | <p>86. Modify a Motion Tween. (3 hrs) 87. Save Custom Presets & Create Layer Folders. (3 hrs) 88. Set Static Frames. (3 hrs) 89. Build a Test Movie. (3 hrs)</p> | |
| | | <p>Motion in 2D Animation 90. Perceive and apply how to animate a ball and to loop animations. (3 hrs) 91. Create a shape between moving a circle shape into a square. (3 hrs) 92. Create a spinning piece of text. (2 hrs) 93. Create a shiny text effect. (2 hrs) 94. Add a Motion Tween. (3 hrs) 95. Create a Motion Tween from a Shape. (2 hrs) 96. Create a Fade-in by Adjusting the Alpha. (2 hrs) 97. Set Property Keyframes for Scale & Rotation. (3 hrs) 98. Ease Keyframes. (2 hrs) 99. Make a Motion Preset. (3 hrs)</p> | <ul style="list-style-type: none"> • To learn how to use animation including saving it and then using it, in a different program . • Basics of Flash animation. • Types of Flash animation . • Motion Tween. • Shape Tween. • Frame-by-Frame Animation. • Guided Motion Tween. |
| | | <p>Advanced 2D Animation Techniques 100. Practice Audio and Video Editing techniques. (2 hrs) 101. Practice Publishing and exporting. (2 hrs) 102. Use Animation for Portfolio making and development. (2 hrs) 103. Practice Background composition. (2 hrs) 104. Import Slideshow Content. (3 hrs)</p> | <ul style="list-style-type: none"> • Coordinate and manage the production of a student film, including the aspects of cinematography, art direction and editing. |

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| | | <p>hrs)</p> <p>105. Animate the First Image in the Slideshow. (2 hrs)</p> <p>106. Swap Objects. (3 hrs)</p> <p>107. Work in a Movie Clip Timeline. (3 hrs)</p> <p>108. Non-linear Animation. (2 hrs)</p> <p>109. Use the Distribute to Layers Command. (2 hrs)</p> <p>110. Adjust Timeline View Options & Animation Timing. (3 hrs)</p> <p>Actionscript and Behaviours</p> <p>111. Introduce ActionScript. (2 hrs)</p> <p>112. Create Buttons & Setting Button States. (2 hrs)</p> <p>113. Add Site Content. (2 hrs)</p> <p>114. Add Behaviors with ActionScript 2. (3 hrs)</p> <p>115. Add a Stop Action. (2 hrs)</p> <p>116. Create Interactive Text Buttons. (2 hrs)</p> <p>117. Set up for ActionScript 2. . (2 hrs)</p> <p>118. Write ActionScript 3. (2 hrs)</p> | |
| <p>Professional skills - 90Hrs</p> <p>Professional Knowledge - 30Hrs</p> | <p>Produce/Post Produce with Painting & Animating, Incorporate sound into 2D animation, perceive Background Composition, 2D Animation for Site publication.</p> | <p>Painting & Animating</p> <p>119. Use GIMP to scan and edit images. (4 hrs)</p> <p>120. Work with ink and paint in GIMP program. (4 hrs)</p> <p>Incorporating sound into 2D animation</p> <p>121. Practice the process for digitizing sound. (4 hrs)</p> <p>122. Practice and use of important audio components. (4 hrs)</p> <p>123. Make list sources for audio</p> | <ul style="list-style-type: none"> • Understand the stages of 2D animation • List the techniques of scanning inked drawings • Professional grade software: Adobe Flash, Toon Boom • Explain why audio is so important in animation • Non-diegetic and Diegetic • Appropriateness and Intended audience |

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| | | <p>clips. (4 hrs)</p> <p>124. Lip Sync and Mouth Chart. (4 hrs)</p> <p>125. Synchronize animation to speech. (4 hrs)</p> <p>126. Use the functions of audio components. (4 hrs)</p> <p>127. Considerations when using audio in animation. (4 hrs)</p> <p>128. Identify sources of Sound Files. (4 hrs)</p> | |
| | | <p>Understanding Background Composition</p> <p>129. Add a Sound File to the Timeline. (4 hrs)</p> <p>130. Encode Video for Import into Flash. (4 hrs)</p> <p>131. The FLVPlayback Component & Component Inspector(4 hrs)</p> <p>132. Add Sound to a Button. (4 hrs)</p> <p>133. Set Import Options & Choose a Player Skin. (4 hrs)</p> <p>134. Flash Video for ActionScript 2 & Older Players. (4 hrs)</p> | |
| | | <p>2D Animation for Site publication</p> <p>135. Overview of Flash Publish Settings. (4 hrs)</p> <p>136. Compression in Bitmaps & Sounds. (4 hrs)</p> <p>137. Other Flash Publish Settings. (4 hrs)</p> <p>138. HTML Settings. (4 hrs)</p> <p>139. Publish Your Flash Movie. (4 hrs)</p> <p>140. Integrate Dreamweaver(R). (4 hrs)</p> <p>141. Upload Your Site to a Server via FTP. (4 hrs)</p> | |

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| | | 142. Apply Credits. (2 hrs) | |
| Examination | | | |

7. ASSESSMENT CRITERIA

| LEARNING OUTCOMES | ASSESSMENT CRITERIA |
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| <p>1. Perceive 2D ANIMATION and various drawing concepts with colour theory and basics.</p> | Identify the various types of animation. |
| | Traditional. 2D, Computer Animating, Motion graphics, Stop motion. |
| | Squash and Stretch, Anticipation, Staging, Straight ahead pose to pose animation, Slow in and Slow out, Arcs etc. |
| | Draw Receptive and Projective Drawing, Casual, Preparatory and finished drawing with portraits, landscapes, figurative genre works. |
| | Manage colour across applications, calibrate and develop colour palettes. |
| | Use colour wheel and application of colour theory with colour physics. |
| <p>2. Carry out Layout and Designing with Basic of Sketching, Still life and assignment of basic drawing. Create various Composition of basic elements, Apply Concepts of working in media, Explore the relationship between elements and principle, Pixel Resolution: Vector and Bitmap Graphics.</p> | Develop wire outline, line of development, points of interest, shading methods. |
| | Use of line, scale, applying negative space symmetry, transparency and other elements of drawings. |
| | Implement Washes and glazes, Mixed media techniques for collage |
| | Identify relationship among elements of drawings and use hierarchy framing. |
| | Practical application of megapixels, aspect ratio, true colour, raster, vector etc. |
| | Depth of pixel colour and intensity. |
| <p>3. Implement GRAPHICS AND BROADCASTING in DESIGN with Creating Digital layout & image editing, Character design & Image composing.</p> | Image editing work. |
| | Advance raster techniques with lighting and shadows and Image trapping with crop marks. |
| | Create designs from simple shapes and effects. |
| | Silhouettes from shapes and give more function and stronger elements. |
| | Identify relationship between shape and character design. |
| | Create contrasting characters designing and placing them in story telling moments. |

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| 4. Create and Manage content, Website Content, Timeline in 2D Animation, Creating Graphics and motion animation, Motion in 2D Animation, Advanced 2D Animation Techniques & Action script and Behaviours. | Draw and selecting simple vector shapes with drawing tools. |
| | Draw curves and interaction of shapes in object drawing mode. |
| | Work with layers, use bitmaps and add text. |
| | Create a span of frames and control the playhead, creation of keyframes. |
| | Use solid layers for motion graphics, motion presents and static frame applications. |
| | Ball and loop animations, circle shape into square, spinning piece of text, motion tween and Frame by frame motion tween. |
| | Implement audio and video editing techniques, make use of background composition, importing slide show content, animating first image in slideshow and Swapping objects. |
| | Adjust timeline view options and animation timing. |
| | Create buttons and setting buttons states, adding site content, adding behaviours with action scripts. |
| 5. Produce/Post Produce with Painting & Animating, Incorporating sound into 2D animation, Understanding Background Composition, 2D Animation for Site publication. | Use GIMP to scan and edit images. |
| | Digitize sound and use of important audio components. |
| | Perceive sources of audio clips. |
| | Do Lip Sync and mouth chart with synchronizing animation. |
| | Add sound file to the timeline, Encode video for import into flash. |
| | Add sound to a button, the FLVPlayback component and component inspector. |
| | Compress in bitmaps and sounds with other flash publish settings. |
| | HTML Settings and Publishing of movies. |
| Credits creation. | |

ANNEXURE-I

| LIST OF TOOLS & EQUIPMENT | | | |
|----------------------------------|--|---|---|
| 2D ANIMATOR | | | |
| S No. | Name of the Tools and Equipment | Specification | Quantity |
| A. Tools & Equipments | | | |
| 1. | Desktop Computer | CPU: 32/64 Bit i3/i5/i7 or latest processor, Speed: 3 GHz or Higher. RAM:-16 GB DDR-III or Higher, Wi-Fi Enabled. Network Card: Integrated Gigabit Ethernet, with USB Mouse, USB Keyboard and Monitor (Min. 17 Inch.) Licensed Operating System and Antivirus compatible with trade related software. | 20 Nos. (For Trainee) + 1 No. for Instructor |
| 2. | Wi-Fi Router | With Wireless Connectivity | 1 No. |
| 3. | Switch | 24 Port | 1 No. |
| 4. | Structured cabling in Lab | to enable working with Wired Networks for Practical | As required |
| 5. | Internet Connectivity | Broadband connection with min. 2 mbps speed | As required |
| 6. | Colour Laser Printer | Colour A4 Size | 1 No. |
| 7. | Digital Web Cam | High Resolution (3.1 mp or higher) | 4 Nos. |
| 8. | DVD or Blu-Ray Writer | 24X or higher external (usb) | 2 Nos. |
| 9. | LCD Projector | 3000 lumens or higher | 1 No. |
| 10. | Projector Screen | matte(antiglare) screen | 1 No. |
| 11. | UPS | | As Required |
| 12. | Crimping Tool | RJ-45 | 5 Nos. |
| 13. | Network Rack | 4U for 24 port | 1 No. |
| 14. | Screw Driver Set | Standard | 4 Sets |
| 15. | Mini Dongle for Bluetooth devices Connection | USB | 4 Nos. |
| 16. | Headphone & mic. set | Wired | 5 Nos. |
| 17. | Sound System | 4:1 | 2 Nos. |
| 18. | External Hard Disk | 1 TB | 2 Nos. |

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| 19. | Patch Panel | 24 Port | 2 Nos. |
| 20. | LAN Tester | UTP cat5 cable tester (RJ 45) | 5 Nos. |
| 21. | Punching Tool | for punching RJ 45 socket with cat 5 cable | 5 Nos. |
| 22. | Audio Cable | Balanced XLR, Umbrella, Stereo and Mono | As required |
| 23. | Video Cable | BNC, HDMI, USB, VGA | As required |
| B. SOFTWARE | | | |
| 24. | Adobe Suit | Consisted of several Adobe applications like Photoshop, Acrobat, Premiere Pro or After Effects, In Design, and Illustrator that are the industry standard applications for many graphic design positions. | 21 licenses |
| 25. | Anti Virus | | 21 licenses |
| 26. | Web Hosting Space | 100 MB space | 1 license |
| GENERAL INSTALLATION AND MACHINERIES | | | |
| 27. | Digital Drawing Tablet/Graphic Drawing tablet | | 20 |
| 28. | Vacuum cleaner | Hand Held | 1 No. |
| 29. | Pigeon hole cabinet | 20 compartments | 1 No. |
| 30. | Chair and table for the instructor | with armrest mounted on castor wheels, adjustable height/Standard | 1 each(for class room & laboratory) |
| 31. | Dual Desk or Chair and Tables for Trainees | Standard | 12 / 24 Nos |
| 32. | Computer table | laminated top 150X650X750 mm with sliding tray for key board and one shelf of storage | 20 Nos. |
| 33. | Operators chair | without arms mounted on castor wheels, adjustable height | 24 Nos. |
| 34. | Printer table | 650X500X750 mm can be varied as per local specifications | 3 Nos. |
| 35. | Air conditioner | | As Required |
| 36. | Storage cabinet | 60X700X450mm | 1Nos. |
| 37. | White Board | minimum 4X6 feet | 1 No. |

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| 38. | Steel Almirah | 2.5 m x 1.20 m x 0.5 m | 1 No. |
| 39. | Fire Extinguisher CO2 | 2 KG | 2 Nos. |
| 40. | Fire Buckets | Standard size | 2 Nos. |

NOTE: *If Above Tools, Equipments and general machineries are available with MASE Trade running on the ITI the same may be utilized.*

ANNEXURE-II

The DGT sincerely acknowledges contributions of the Industries, State Directorates, Trade Experts, Domain Experts and all others who contributed in designing/ revising the curriculum. Special acknowledgement is extended by DGT to the following expert members who had contributed immensely in this curriculum under Media and Entertainment STCC.

| List of Expert Members contributed/ participated for finalizing the course curriculum of 2D Animator. | | | |
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| S No. | Name & Designation Shri/Mr./Ms | Organization | Remarks |
| 1. | Sh. TVLN Rao | Director, RDSDE Vijaywada | Convener |
| 2. | Sh. C S Murthy, JD | CSTARI Kolkata | Member |
| 3. | Shri K. Anada Rao, Inspector of Training (ADT) | Office of the Regional Dy. Director, ITI Campus, Padmavathipuram Tirupathi, A.P. | Member |
| 4. | Shri Bollu Sudhakar, General Secretary, FAIPITIA and APSPITIMA | Principal, Sri Sai Venkateswara ITI, Venugopala Nagar, Gooty Road, Old Town, Ananthapur, AP | Member |
| 5. | Shri Bharat Nigam, Training Officer | CSTARI, EN-Block, Salt Lake, Sector V, Kolkata, West Bengal 700091 | Member |
| 6. | Shri Asfaq Ahmed | NIMI, CTI Campus, Guindy, Chennai, Tamil Nadu 600032 | Member |
| 7. | Shri Arpanesh Mani, Vice President – Industry Alliances | NSDC, 301, 3rd Floor, West Wing, World Mark 1, Asset 11, Aerocity, New Delhi – 37 | Member |
| 8. | Shri V. Subrahmanyam, Dy. Director | Doordarshan Kendra, T.V Studio, Ramanthapur Hyderabad 500013 | Member |
| 9. | Shri Y. S. Sudheer, Media Consultant | Flat No.304, Padmavathi Residency, Padma Sri Hills, Bandla Guda Jagir, Near Sun City, Hyderabad--500 086 | Member |
| 10. | Shri P. Mouli, Asst. Director | RDSDE, 2nd Floor, NTR Adm Bulg, PN Bus Station, Vijayawada, A. P.-520013 | Member |
| 11. | Shri G V B Sarma, T.O | RDSDE, 2nd Floor, NTR Adm Bulg, PN Bus Station, Vijayawada, A. P.-520013 | Member |
| 12. | Shri B. Appa Rao, T.O. | RDSDE, 2nd Floor, NTR Adm Bulg, PN Bus Station, Vijayawada, A. P.- | Member |

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| | | 520013 | |
| 13. | Shri M. Jignesh, Asst. Director | RDSDE, 2nd Floor, NTR Adm Bulg, PN Bus Station, Vijayawada, A. P.- 520013 | Member |
| 14. | Sh. B Biswas, Training Officer | CSTARI Kolkata | Member |
| 15. | Sh. R.N. Manna, TO | CSTARI, Kolkata | Member |
| 16. | Sh. Bharat Kumar Nigam, TO | CSTARI, Kolkata | Member |
| 17. | Sh. Snehasish Bandyopadhyay, TO | CSTARI, Kolkata | Member |
| 18. | Ashoke Rarhi, DDT | CSTARI, Kolkata | Member |
| 19. | K.V.S. Narayana, Training Officer | CSTARI, Kolkata | Member |
| 20. | P. K. Bairagi, Training Officer | CSTARI, Kolkata | Member |
| 21. | Akhilesh Pandey, Training Officer | CSTARI, Kolkata | Member |