

I. DIGITAL IMAGING (CREDITS: 4)

Section-A

Unit I: Graphics Design: Introduction, Graphics, Historical Background of Broadcast Graphics, Principles of Design, Design Elements, Fundamentals of Computer Graphics, Print Graphics and TV Graphics, Understanding Digital Images: Introduction, A Brief History of Designing, Pixel and Bitmaps, Resolution and Pixel Dimension, Aspect ratio 4:3, Understanding image File Formats, Optimising Digital Images

Unit II: Understanding Color: Introduction to Color, Color Theory, Color Harmony, Color Contrast, Cool and Warm Colors, Additive And Subtractive Colors Modes, Color And Graphics, Colors For The Web, Converting Image Between Color Modes, Visual concepts and Graphics preparation: Introduction, Origin Of Broadcast Graphics, Graphic Designing, Implications for Design, Graphic Requirement for TV Program, Preparing TV Graphics, Title Safe And Action Safe Margin, Vector Graphics, Raster Graphics , Visual Effects (VFX) Design , Illustrations and their Use In Graphic Designing

Unit III: Introduction to Digital Composition: Introduction, Technical Process of Digital Composition, Generation of Images through Photography and Computer Graphics, Elements of a Digital Composition, Printing Techniques of a Digital Composition, Use of Digital Elements in Digital Layouts: Introduction, A Brief History of Designing Design Elements, Line, Scale, Colour, Shape, Negative Space, Symmetry, Transparency, Texture, Balance, Hierarchy, Contrast, Framing, Grid, Randomness, Repetition, Rules, Movement, Depth, Typography, Composition, Basics of Image Editing: Introduction, Scanning and Capturing Images, Image Editing, Colour Adjustments, Masking

Section-B

Unit IV: Raster, Vector Graphics & Typography: Introduction, Raster Graphics, Resolution, Vector Graphics, Properties of Vector Graphics, Properties of Vector Design, Software used in Vector Graphics, Vector Graphics in various Industries, Difference between Raster Graphics and Vector Graphics, Typography, Properties of Typography, Steps of Creating Typography

Unit V: Introduction to Krita: Introduction, Use of Krita, Tools of Krita, Menu Bars of Krita, Familiarization to Inkscape: Introduction, A Brief History of Designing, Tools of Inkscape, File Menu, Edit Menu, Duplicate, Delete, Create Guides around the page, View Menu, Illustration and Vector Design using Inkscape: Introduction, Menu Bars of Inkscape, Object Menu, Path Menu, Text Menu, Filters Menu, Extension Menu

Unit VI: Working with Digital Images: Introduction, Structure of digital images, Four-Channel

Images, Attributes of digital images, Digitizing Images, Image Resolution, Image Aspect Ratio, Pixel Aspect Ratio, Display Aspect Ratio, Managing file formats for Images: Introduction, Image file formats, Photographic Images vs. Graphics, Compression, EXR, File Formats, Dots per inch (dpi), Image Editing with GIMP: Introduction, What is GIMP?, Features and capabilities, Basic GIMP Concepts, Working with Digital Camera Photos, Creating a Contrast Mask, Layer Masks, Selective Colorization Example, Basic Color Curves, Techniques behind VFX: Introduction, Visual Effects, Digital Compositing, Computer-Generated Imagery, Preparing for your visual effects shot, Tips for VFX Artists in Preproduction