Syllabus for Diploma in Multimedia & Animation(DMA) For Academic Session 2017-18

Programme Objective:

1. To enable the students to be multimedia literates, which will prepare them to actively participate in various media related activities for strengthening their skills.
2. The Course will have scope for skill development in the field of Electronics and Print Media Production, which in turn make them employable in the media industry.

Duration: 1Year   Total Credits: 32

Sl. No.	Course Title	Course Code	Block	Units	Credits	Theory	Practical
Semester-1							
1	Introduction to Multimedia	DMA-01	5	20	4	5	-
2	Digital Imaging	DMA-02	5	20	6	4	1
3	2D Animation	DMA-03	5	20	6	2	3
Semester-2							
4	3D Animation	DMA-04	5	20	6	2	3
5	AV Production	DMA-05	5	21	6	4	1
6	Project	DMA-06	5	20	4	0	0

DMA-01
Introduction to Multimedia

Block – I: Introduction to Computers & Networks	
Unit- 1	Multimedia Hardware
Unit- 2	Multimedia Software
Unit- 3	Multimedia operating systems
Unit- 4	Multimedia communication systems

Block – II: Content Development & Distribution	
Unit- 1	Desktop publishing (Coral Draw, Photoshop, Page maker)
Unit- 2	Multimedia Animation &Special effects (2D/3D animation, Flash)
Unit- 3	Social Networking &Publishing (Blogging, Facebook, Youtube, Instagram etc.)
Unit- 4	Content Distribution Systems (CD/DVD, Internet, Radio, Television)

BLOCK- III: Art & Science of Multimedia	
Unit- 1	Audio fundamentals (Audio quality, formats and devices)
Unit- 2	Understanding Image and Video (Resolution, Color, Video standards, formats)
Unit- 3	Film and Digital photography (technology, techniques, composition & lighting etc.)
Unit- 4	Introduction to Printing technology

BLOCK- IV: Programme Production Techniques	
Unit- 1	The Media Industry: Structure and Strategies
Unit- 2	Audio-Video programme production(Concept to Mastering)
Unit- 3	Compositing and Audio-Video Editing
Unit- 4	Web Design and Publishing (Web design and development)

BLOCK-V: Media Management & Marketing	
Unit- 1	Ownership of Media, Media as Business & Media Economics
Unit- 2	Income sources of Different Media
Unit- 3	Government Policies for Media Ownership
Unit- 4	Career avenues in multimedia

DMA-02	
Digital Imaging	
Block – I: Introduction to Digital Imaging	
Unit- 1	Basics of Graphic Design and use of Digital technology
Unit- 2	Definition of Digital images
Unit- 3	Colour theory & basics
Unit- 4	Digital imaging in multimedia and animation
Block – II: Digital Imaging: Aesthetics and Artistry	
Unit- 1	Introduction to Digital Composition
Unit- 2	Use of Design Elements in Digital Layouts
Unit- 3	Scanning / Capturing Images, Image editing, Masking and Colour adjustments
Unit- 4	Raster & Vector Graphics and Typography
BLOCK- III: Image development on different Graphic Software	
Unit- 1	Krita -Familiarization with Interface, tools and feature
Unit- 2	Familiarization with Interface of Ink space
Unit- 3	Digital tools for Illustrations, uses and technique
Unit- 4	Dealing with Professional software
BLOCK- IV: Preparation of Digital Images using Media technologies	
Unit- 1	Working with digital images, creating textures for 2D - 3d models and scenes
Unit- 2	Managing File formats for images, import and export techniques
Unit- 3	Editing Images, Cutting and Morphing
Unit- 4	Techniques behind VFX (special effects)
BLOCK-V: Finishing and Digital Media Outputting	
Unit- 1	Practical- Graphics for TV production & Creating earth texture for 3D globe
Unit- 2	Practical-Create Colorful vector character art in Krita
Unit- 3	Practical- Create texture tricks with vector artwork in Inkspace
Unit- 4	Practical- Create T-Shirt design in Illustrator using Tiger Picture in vector art

DMA-03
2D Animation
BLOCK – I: Introduction to 2D Animation
Unit- 1	Introduction to 2D Animation
Unit- 2	Drawing concept
Unit- 3	Colour theory & basics
Unit- 4	Incorporating sound into 2D animation
BLOCK – II: Layout & Designing
Unit- 1	Basic of sketching, still life and assignment of basic drawing, Composition of basic elements
Unit- 2	Work in different media, such as drawing, collage, and painting
Unit- 3	Explore the relationship between elements and principal
Unit- 4	Pixel and resolution: Vector and Bitmap Graphics
BLOCK- III: Graphics and advertising (Practical)
Unit- 1	Creating Digital Layout
Unit- 2	Professional image editing (**PHOTOSHOP**)
Unit- 3	Advertising and relevant case , Graphics and illustration (**Corel Draw, Paint**)
Unit- 4	Vector Composition , 2D animation (**Macromedia Flash**)
BLOCK- IV: Broadcast Design   (Practical)
Unit- 1	Working with visual images
Unit- 2	Story Boarding
Unit- 3	Titles and Credit Making
Unit- 4	Stop motion animation
BLOCK-V: Production / Post-Production   (Practical)
Unit- 1	Paint & animate (scanning, tracing, ink & Paint)
Unit- 2	Understanding Background composition
Unit- 3	Basic Understanding of 2D animation and technique
Unit- 4	Animation with flash, Portfolio Making

DMA-04	
BLOCK – I: 3D Modeling	
Unit- 1	Introduction to 3D space in Blender
Unit- 2	Introduction to Modeling Techniques
Unit- 3	In- organic Modeling
Unit- 4	Organic Modeling
BLOCK – II: 3D Shading	
Unit- 1	Use of Materials & Shader
Unit- 2	Shader and Texture editing
Unit- 3	Shading organic Models
Unit- 4	Shading In – Organic Models
BLOCK- III: 3D Animation and Rigging (Practical)	
Unit- 1	Introduction to 3D Animation
Unit- 2	Create, Edit and working with Animation Graph, Rigging using Blender
Unit- 3	Setting up controllers for joints
Unit- 4	Simple Skeleton structure with proper joint orientation,
BLOCK- IV: 3D Lighting and Rendering (Practical)	
Unit- 1	Understanding Lighting in Cycles
Unit- 2	Direct and Indirect Lighting
Unit- 3	Light Linking, Final Composition
Unit- 4	Creating composition and Light with the Shaded Models
BLOCK-V: 3D Dynamics (Practical)	
Unit- 1	Introduction to Dynamics, Active and Passive Bodies
Unit- 2	Creating basic Simulation and collusion using Rigid body
Unit- 3	Cloth Simulation, Simulation of Brick wall collusion
Unit- 4	Introduction to Fluid Effects, Creating fluid simulation

DMA-05	
Audio Visual Production	
BLOCK – I: Audio Production	
Unit- 1	Concept of Sound, Types of sound, Audio range
Unit- 2	Know your equipments (Acoustic, Microphone, Recorder, Audio Mixer, Cables & connectors)
Unit- 3	Process of recording, Mixing, Sound processing, Recording level
Unit- 4	Audio Editing, Dubbing & voiceover (Process, steps)
BLOCK – II: Video Production (Pre-Production)	
Unit- 1	Concept, What is pre-production, Concept/visualization
Unit- 2	R & D, Screen play writing, Storyboard making, Shooting script writing
Unit- 3	Peoples involved in pre-production
Unit- 4	Set making, Copyright , Music making, Budgeting
Unit- 5	Production Design, Location hunting, Hiring of equipment & crew members
BLOCK- III: Video Production (Production)	
Unit- 1	Know your equipment, Camera & accessories
Unit- 2	Lights & camera support
Unit- 3	Clapboard , Sound equipment, Field Monitor
Unit- 4	Blocking, Rehearsal, Lighting, Shooting
BLOCK- IV: Video Production (Post Production)	
Unit- 1	Compiling the concept and Shooting material to final stage
Unit- 2	Peoples involved in Post-production, Know your equipment
Unit- 3	Editing, Color grading, Publicity
Unit- 4	Transmission, Distribution and Rating
BLOCK-V: (Practical)	
Unit- 1	Recording & Mixing of multi-track audio
Unit- 2	Budget Making & Script writing 05 minutes program
Unit- 3	Shooting for 05 minutes program (News / Music Video / Documentary / Feature / Chat show / Discussion etc.)
Unit- 4	Editing of 05 minutes video program

DMA-06	
Project	

BLOCK – I: Digital Imaging

	Design Print advertisement for Service	1.
	Design Print advertisement for Product	2.
	Design Print advertisement an Event	3.
	Design Print advertisement on Social Awareness	4.
	Design a collage with a social message	5.

BLOCK – II: 2D animation

1	Drawing fundamentals using lines
2	Sketching of cartoon characters
3	2D Logo designing
4	Storyboarding of a 30 seconds film
5	Portfolio making of an organization

BLOCK- III: 3D Animation

1.	Exploring the Interface of 3D application & Basic Modeling
2.	Create different types of Materials and create a Shading
3.	Create a simple walk cycle using the character rigs
4.	Create a composition and Light set up
5.	Create a Fluid simulation & rendering

BLOCK- IV: Audio Production

1.	Knowing the audio equipments & software
2.	Recording process
3.	Mixing & Editing of various sound
4.	Exporting sound in various audio formats & project

BLOCK-V: Video Production

1.	Story writing, Storyboard making, Shooting script writing
2.	Location hunting, Breakdown making, Budget making
3.	Set making, Lighting, Shooting
4.	Editing, BGM posting, Color grading, Publicity, Exhibition & Transmission