



**Mahatma Gandhi University**  
MEGHALAYA  
[www.mgu.edu.in](http://www.mgu.edu.in)

**SYLLABUS MANUAL**

# **PROFESSIONAL PROGRAMME**

**PROGRAMME CODE --- 103**  
**Diploma in VFX & ANIMATION (DVFXA)**

**SEMESTER I**

<b>CODE</b>	<b>SUBJECT</b>	<b>CREDIT</b>
DVFXA11	Traditional Arts and Digital Techniques	3
DVFXA12	Basic of sketching and drawing	3
DVFXA13	Fundamentals of photography	3
DVFXA14	Basic fundamentals of film making	3
DVFXA15P	Practical on film making	4
<b>TOTAL</b>		<b>16</b>

**SEMESTER II**

<b>CODE</b>	<b>SUBJECT</b>	<b>CREDIT</b>
DVFXA21	Introduction & Advancement of 3D	3
DVFXA22	3D Basics & 3D environment design	3
DVFXA23	3D character Design	3
DVFXA24	Fundamental of UV layouts	3
DVFXA25P	Practical on 3D Design	4
<b>TOTAL</b>		<b>16</b>

**Detailed Syllabus**

**SEMESTER I**

**DVFXA11 --- Traditional arts and digital techniques**

Basics of Sketching & Drawing  
Historical and Contemporary Graphic Design  
Fundamentals of Communication and Design  
Tools & Techniques  
The Process of Design  
Type & Typography

The shape of Design

SIGNS, SYMBOLS & CLIENT IDENTITY

Career Opportunities in the Visual Art

Basics of Printing Technology

Creating e-Portfolios

**DVFXA12 --- Basic of Sketching and Drawing**

Lines in different grades o pencils HB +0.8b,

Shading in pencil medium,

Shading, shading in different angles of pencil strokes,

Formatting in different textures in pencil,

Simple objects in drawing,

Simple shapes of geometrical shapes,

Paper division & forming of sky land, stones, deserts,

Trees & plants, roadsides, rivers,

Perspective in lines in landscapes,

Different head shapes,

Characters, horror characters

Human anatomy parts like hand, legs, arms,

**DVFXA13 --- Fundamentals of Photography**

The Exploration Stage

The past and future of Photography

Selection and Treatment

Execution, Installation & Presentation

Inside the digital camera

The Principles of Photography

Types of cameras, Lenses,

Camera Controls, Exposure Meter

Managing Your Digital Assets

Beyond the Basics

Product Photography

Interior and Exteriors, Action and Sports Photography

**DVFXA14 --- Basic fundamentals of Film Making**

Introduction to Film, HD, & Documentary Production

Pre - Production

What is Cinema?

Art vs. Business

Film Form

Elements of a Screenplay

Elements of Cinematography

Elements of Film Directing

Elements of a Film Production

Elements of Film Editing

Post-Production

Deliverables

**DVFXA15P --- Practical on Film Making**

Digital Fiction Production

Moving Narratives

Camera, Sound & Editing  
Short Film Production  
Writing for the Screen  
Directing Actors  
Documentary: Theory and Practice  
Professional Industry Practice  
Small Screen Production or Short Film, Big Screen  
Movements in Film  
Analyzing Film, Broadcast and New Media  
Advanced Camera, Sound & Editing  
Planning, Production and Project Management  
Directing Fiction and Drama  
Experimental Film, Digital Feature Film Production

## **SEMESTER II**

### **DVFXA21 --- Introduction and Advancement of 3D**

Introduction of 3D  
Getting in Control of 3D Space  
Solid Modeling and the tools of the Trade  
Color, Texture and surface styles  
Tips and tricks for good lighting  
Virtual camera movement  
Rendering  
Dummy properties  
Character Animation  
Using advanced techniques  
Preparation for Multimedia Development  
Post Production.

### **DVFXA22 --- 3D Basics & 3D Environment Design**

Introduction of 3D Basics  
Environment and Set Design  
Modeling and Texturing Environments and Sets  
Lighting Considerations and Techniques  
Intermediate Texturing  
Rendering  
Fogs, Atmospheres, Volumetric, and Special Effects  
Particle Systems: Basic, Advanced and Particle Flow  
Post-production considerations  
Character Design, Rigging and Animation  
Bone-based Rigging, Biped basics  
Attaching the model to the Biped, Animating the Character

### **DVFXA23 --- 3D Character Design**

Designing for the screen  
Simple 2D shape design  
Volumetric design  
Personality design

Costume and period design  
Character line-up  
Model sheets: preparation  
Designing facial expressions for animation  
Advanced costume design  
Modeling I: geometric polygonal sculpting in Maya  
Advanced 3D design II: texture mapping  
Modeling III: organic shape sculpting with Zbrush  
**DVFXA24 --- Fundamental of UV layouts**  
Introduction to UV mapping  
How to projects a texture map onto a 3D object.  
What is UV mapping and how its work  
How to project mapping (sphere, cylinder, and box)  
How to Create Texture in Photoshop  
Import texture from Photoshop  
How to apply mapping  
Set the UV layouts according to Mapping  
**DVFXA25P --- Practical on 3D Design**  
Designing for the screen  
Simple 2D shape design  
Volumetric design  
Personality design  
Costume and period design  
Character line-up  
Model sheets: preparation  
Designing facial expressions for animation  
Advanced costume design  
Modeling I: geometric polygonal sculpting in Maya  
Advanced 3D design II: texture mapping  
Modeling III: organic shape sculpting with Zbrush

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