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**Department of Computer Science**

**Course Name**  
**Certificate in Animation**

This certificate course will provide a basic foundation in the fundamentals of Artistic Design, Digital Content Creation and Portfolio Development. This course will help to gain skills in computer Animation. This will also help to learn how to complete a Portfolio of student work which will help them to sell their skills to employers in the fast paced industry. The contents of this certificate courses are dynamic and are based upon the industry trends.

**Structure of Course**

<b>Module – I</b>	<b>Pre Production Techniques in Animation</b>	<b>100 Marks</b>
<b>Module– II</b>	<b>2D Production (2D Animation)</b>	<b>100 Marks</b>
<b>Module– III</b>	<b>Practical Based on Module –I &amp; Module - II</b>	<b>100 Marks</b>

<b>Sr. No</b>	<b>Papers</b>	<b>Credit</b>	<b>Hours for Credit</b>	<b>Total</b>	<b>Total Marks</b>
1.	Module- I	6	15	90	100
2.	Module- II	6	15	90	100
3.	Module - III	8	15	90	100

## Objectives

The objectives of Certificate Courses shall be as follows :-

- To familiarize the students with various software approaches and techniques of Animation Technology.
- To develop competencies and skills.
- Exploring different approaches in computer animation.

## Duration

These three Modules of course is excepted to complete in 1 year

## Medium of Instruction

The medium of instruction for the course shall be English.

## Eligibility

Higher Secondary School Certificate (10+2) or its equivalent Examination

## Intake Capacity

This course has intake capacity of 60 student

## Course Mode

This course will be conducted as Part Time course

Detail course content of the certificate courses is as follows -



## **Certificate Course in Animation**

### **Paper - I**

#### **Pre Production Techniques in Animation**

##### **Unit I – Introduction to Animation**

What is Animation, History of Animation, Principle of Animation, Types of Animation & Animation Tech, Classical Animation, Stop Animation, Clay animation, Frame Animation, Cell Animation, Components used for designing animation such as light box, Live Shooting, Love, Photography, Croma Shoot, Techniques of story boarding for digital film making Understanding vector animation) ,Use of Animation in Industries, Concept of 2D, 3D animation

**(Lectures 15)**

##### **Unit II – Component Use for Designing Animation**

Components used for designing Animation such as light box, live shooting, Love photography, Chrome shoot , Techniques of story boarding for digital film making, Understanding vector Animation, Application of Animation in Industries, Concept of 2D, 3D Animation . **(Lectures 15)**

##### **Unit V – Image Editing**

Understanding Image, Different Image file formats, different color representations in image, capability and limitations of different image formats, creation of digital image, software's used for image editing

##### **Unit III - Audio Editing**

Introduction to Multimedia and its Components, Audio File Formats, Steps for making digital audio, concept of sound editing, Different software's used for sound editing, steps for recording sound, Red Book slandered for recording sound .**(Lectures 15)**

#### **Unit IV – Video Editing**

Introduction to video editing, Different format for video files, Software's used for video editing, Optimizing video files for CD-ROM. **(Lectures 15)**

##### **Text Books:**

1. Experimental animation: an illustrated anthology Robert russet and Cecile Starr.
2. The Everything Drawing Book: From Basic Shapes To People and Animals by Helen south
3. A guide to Computer Animation : by Marcia Kuperburg
4. Multimedia Learning – by Richard Mayer

##### **Reference Books:**

1. Visual art: a critical introduction by James Morton Carpenter (Harcourt Brace Jovanovich publishers)
2. Making Clay Animation by Nancy Smith, Melinda Kolk.
3. Clay Modeling by Sally Henry (Rosen Publishing Group)
4. Optical Illusion Flip-Book: Astounding Optical Illusions by Gyles Brandreth, Katherine Joyce (sterling publisher)



## **Certificate Course in Animation**

### **Paper - II**

#### **2D Production [ 2D Animation ]**

##### **Unit I – Understanding Flash Workspace**

Flash workflow & Workspace, Introduction to flash, Workspace overview, Customize the workshop using the stage and tools panel, Introduction to timeline, Using Flash panels, Property inspector Library panel, Movie explorer, History panel, Color panel, Working with Flash documents: Introduction to flash files, Create or open a document and set its properties, View a document when multiple documents are open. Working with project, importing art work into flash (working with PSD files-PSD file import preferences)"

**(Lectures 15)**

##### **Unit II – Understanding Symbols and Libraries**

Adding media to library, Work with libraries and its items, working with timeline, working with scenes, Find and replace command, about templates, Drawing Basics: About vector and bitmap graphics, Flash drawing module, about overlapping shapes, Using flash drawing and painting tools: Draw with pencil tools, draw straight lines, Reshaping lines and shape outlines, snapping (object snapping, pixel snapping and snap alignment), working with color, strokes and fills. **(Lectures 15)**

##### **Unit III – Work with Different Flash Tools**

Working with graphic objects: Selection objects, moving, copying and deleting objects, Arranging objects (Stack, Align, group, Break apart groups and objects) and Transforming object, Using symbols, instances and library assets: Symbols overview, Types of symbols, Create symbols, Convert animation on the stage into a movie clip, Duplicate symbols, Edit symbols, working with symbol instances. **(Lectures 15)**



#### **Unit IV – Creating Animation**

Creating animation: Animation basics, creating motion, creating key frames, Representations of animation in the timeline, Frame rates, Frame by frame animation, Onion skinning, Extend still images, Mask layers. **(Lectures 15)**

#### **5) Flash CS3: Working with Layers:**

Introduction to layers, Hide & Show Layers , Lock a Layer, Add and name layer, change the orders of layers, organize layers in folder, Type of Layers-Guide layer, Mask layer, layer properties Masking Animation, Masking Frame by Frame **(Lectures 15)**

#### **Text Books:**

1. Adobe Flash Professional CS5 Classroom in a Book (Author: Adobe Creative Team) Adobe Press.
2. Flash + after effects by Chris Jackson (Focal press publication).

#### **References:**

1. Flash character animation: applied studio techniques By Lee Purcell (Sams publishing).
2. Adobe Flash Catalyst CS5 Classroom in a Book (Author: Adobe Creative Team).

## **Certificate Course in Animation**

### **Paper - III**

#### **Practical's**

##### **Lab I**

1. Draw simple basic shapes with drawing skills
2. Create a scene of street with lines, shapes and object.
3. Create Digital background image.
4. Import a drawing, trace it and apply colour filter and effect and export to various image formats.
5. Create a cartoon animation using light box and converting it into Animation.

##### **Lab II**

1. Working with Flash Tools
2. Create scene in Flash and color it
3. Create Motion Tween animation
4. Creation of Shape Tween Animation
5. Creating Frame By Frame Animation
6. Use of Filter and Effects in Flash



**Head**

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