




**Syllabus & Curriculum
For Certificate Course In
Flash**

Prepared by DOEACC Centre, Calicut



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1. Course Description

Flash, a popular authoring software developed by Macromedia, is used to create vector graphics-based animation programs with full-screen navigation interfaces, graphic illustrations, and simple interactivity in a small and resizable file format

Flash gives Web designers the ability to import artwork using whatever bitmap or illustration tool they prefer, and to create animation and special effects, and add sound and interactivity.

The course also introduces the ActionScript language and teaches students fundamental programming constructs including conditional logic and functions.

2. Pre-requisite

Students need to be comfortable using mouse, opening and saving files, and the general operations of computer and its Operating System

3. Hardware & Software requirements

Hardware: Personal Computer or a terminal with 115MB free Hard disk space and 256MB RAM for reasonably good performance.

Software: Macromedia Flash MX, with Windows (XP, 2000, or 98)/ MAC OS

4. Course objectives and content

Upon completion of this course students will be able to:

- Create user interfaces using Macromedia Flash UI components
- Create digital portfolios and Flash-based games and sites making use of the tools and ActionScript in Flash.
- Understand how to apply programming concepts in Flash MX using ActionScript
- Demonstrate good skills in developing rich internet and web applications using Flash
- Understand the key aspects of animation and 2D graphics
- Develop vector graphics and 2D animations, making use of various tools and animation techniques provided by Flash.

5. Suggested reference material

a. Text books

- 1 Macromedia Flash MX 2004: The Complete Reference by Brian Underdahl
- 2 Action Script for Flash MX: The Definitive Guide, 2nd Edition By Colin Mook
- 3 Macromedia Flash MX 2004 Bible by Robert Reinhardt and Snow Dowd

b. Recommended Web sites

1. <http://www.webdevelopersnotes.com/tutorials/flash/>
2. <http://www.adobe.com/devnet/flash/>
3. http://www.adobe.com/support/flash/tutorial_index.html
4. <http://www.thefreecountry.com/webmaster/flash.shtml>

c. CDs

- 1 VTC Training CD - Macromedia Flash MX for Designers
- 2 Macromedia Flash MX for Designers Video Training CD by Apex Web Media
- 3 VTC Training CD - Macromedia Flash MX Pro 2004 Advanced Developer

6.Examination /Evaluation scheme

The evaluation will be done based on one theory Examination of 2 hours and practical examination of 3-hour duration.

- a. Theory Examination: The examination will be of 2 hours duration and will contain 100 objective type questions with maximum marks of 100.
- b. The questions will be in proportion to the weightage of the modules described
- c. Practical Examination: One Practical examination of 3 hours duration will be conducted on the modules described in the curriculum. The maximum marks will be 100.

7. Suggested duration for Theory, Practical sessions and Project

Sl.No	Modules	Duration in hrs			Weightage of Modules
		Theory	Lab	Final Project	
1	Flash Environment And Tools	20	10	10	30%
2	Symbols, Animation And Organizing Large Projects	30	20		30%
3	Actionscripting, And Interactivity	15	15		20%
4	Adding Media And Publishing Flash Movies	15	15		20%
Total		80	60	10	100%

Detailed Syllabus

Contents

Module 1: Flash Environment And Tools

Module 2: Symbols, Animation and Organizing Projects

Module 3: Action Scripting And Interactivity

Module 4: Adding Media And Publishing Flash Movies

Module 5: Illustrator Advanced and Printing Options

Module 1 Flash: Environment And Tools

Fundamentals

- Bitmap Vs vector graphics
- Image Vs Movie
- Conventional Animation Vs Flash animations
- Concepts of Frame Rate and Resolution
- PAL, NTSC and Film Standards

Exploring The Flash Interface

- The Flash stage
- Stage Settings
- Creating a new Flash file
- The various import formats
- Timeline- Play head/Frames/Key Frames/ Blank frames
- Menus, Toolbox and Properties
- Keyboard shortcuts and Preferences
- Color Swatches and Color Mixer
- Rulers, Guides, Grids and Snappings
- Common Libraries
- Debugger and Output
- Movie Explorer

Working with images

- Discussing bitmap and vector graphics
- Importing and manipulating images
- Converting bitmaps to vector graphics

Basic drawing and Selections

- Applying the Pencil and Eraser tools
- Drawing with the Pen tool
- Creating custom line styles
- Selection Tools -Arrow Tools, and Lasso Tool
- Navigation Tools - Hand and Zoom Tools

Shapes

- Basic shapes
- Creating rectangles, ovals, and circles, polystar
- Creating freeform shapes
- Selecting and editing shapes
- Using the Selection and Lasso tools
- Transforming shapes
- Copying, moving, and deleting a shape
- Grouping and aligning objects

Color

- Applying color
- Using the Paint Bucket and Ink Bottle tools
- Using the Eyedropper and Brush tools
- Fill Transform Tool
- Custom colors and gradients
- Creating a custom color swatch
- Applying gradients
- Creating a custom gradient

Text

- The Text tool
- Creating an extending text block
- Creating a fixed text block
- Text formatting
- Changing font styles
- Modifying a text block
- Aliasing small text
- Adjusting the kerning of text
- Setting line spacing/margins//indentation
- Converting text into
- Text utilities
- Using the Find and Replace feature
- Using the Spell Checker feature
- Using the History panel

Module 2 Symbols, Animation And Organizing Projects

Layers

- Layer basics
- Merging and rearranging layers
- Deleting a layer
- Modifying layers
- Renaming a layer
- Layers Folders
- Locking and hiding layers
- Masking a layer
- Creating layer folders
- Guide layers
- Creating a guide layer
- Controlling the speed of a motion tween
- Arranging and extending frames

Scenes and Frame Labels

- Creating a Scenes
- Organizing Scenes
- Creating Frame Labels

Symbols and Instances

- About Symbols and Instances
- Using and managing the Symbol Library
- Graphic Symbols
- Movie Clip Symbols
- Managing the Timeline of Movie Clip with the main Timeline
- Button Symbols
- Creating and editing a button symbol
- Controlling tints, brightness and transparency of instances

Animation

- Animation basics
- Timeline, Frames and Key Frames
- Creating a basic text animation
- Creating and manipulating animations
- Creating a basic frame-by-frame animation
- Using Onion Skin to modify an animation
- Using shape tweening and hinting
- Using motion tweening
- Using motion tweening with a guide
- Mask Animations

Module 3 Action Scripting And Interactivity

Introduction To ActionScript

- Understanding Object Oriented Programming
- When to Use ActionScript
- Introducing the Actions Panel
- Working in Normal Mode
- Working in Expert Mode
- Using the Reference Panel
- Understanding ActionScript Syntax

Creating ActionScript Movies

- About Flash Symbol Types
- Adding an Action to Your Script
- Adding an Action to a Key frame
- Adding an Action to an Object
- Adding an Action to a Button
- Planning Your ActionScript Movie
- Tips for Creating Code
- Dissecting an ActionScript

Controlling The Timeline With ActionScript

- Starting and Stopping the Movie
- Navigating to Frames and Scenes
- Creating an Interactive Animation
- Navigating to URLs
- Opening a URL in a Different Browser Window

Controlling Movie Content With ActionScript

- Creating Presentations
- Working with Flash Levels
- Using the LoadMovie and UnloadMovie Action

Creating ActionScript Loops

- About Loops
- Looping Between Frames
- Creating a For Loop
- Creating a While Loop
- Creating a Do While Loop

Working With Variables And Arrays

- About Variables and Arrays
- Understanding Variable Data Types
- Variable and Array Naming Conventions
- Declaring a Variable
- Creating an Array
- Working with Arrays
- Getting Data From an Array

Modifying An Object With ActionScript

- Creating a Movie Clip
- Creating Movie Clip Instances
- Using the Set Property Action
- Changing an Object's
- Getting an Object's Properties

Using ActionScript with Text

- Creating Input Text Blocks
- Creating Dynamic Text Blocks
- Loading Text From an External Document
- Creating Rich Formatted Text

Flash UI Components

- Macromedia Flash UI Components
- PushButton Component
- CheckBox Component
- RadioButton Component
- MessageBox Component
- ComboBox Component
- ListBox Component
- Linking a ComboBox with a ListBox
- Creating a Master-Detail View
- Scrollbars Component
- Changing the Look and Feel of Components

Module 4 Adding Media And Publishing Flash Movies

Working with Sound

- Event vs. Streaming Sounds
- Importing and Placing Sounds
- Putting a sound in the 'over' state of a button

Embedding Video

- Importing video Files
- Modifying and Controlling Videos

Testing and Publishing a Flash Movie

- Selecting Your Publishing Settings
- Previewing and Publishing Files
- Evaluating Download Performance
- Optimization Factors
- Exporting and Publishing Movies



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DOEACC CENTRE CALICUT
POST BOX NO.5,
NIT CAMPUS P.O. CALICUT 673601
KERALA

☎ 0495 2287266
Email: info@doeaccalicut.ac.in
Web: doeaccalicut.ac.in