

Objective

This course introduces students to current practices, technologies, methodologies, and authoring systems in the design and implementation of systems that incorporate text, audio, images, animation and full-motion video.

Theory**UNIT-I**

Fundamental concepts in Text and Image: Multimedia and hypermedia, world wide web, overview of multimedia software tools. Graphics and image data representation graphics/image data types, file formats, Color in image and video: color science, color models in images, color models in video.

UNIT-II

Fundamental concepts in video and digital audio: Types of video signals, analog video, digital video, digitization of sound, MIDI, quantization and transmission of audio.

UNIT-III

Action Script : ActionScript Features, Object-Oriented ActionScript, Datatypes and Type Checking, Classes, Authoring an ActionScript Class, Inheritance, Authoring an ActionScript 2.0 Subclass, Interfaces, Packages, Exceptions

UNIT-IV

Compression Methods: Basic Coding Methods – Run Length coding, Huffman coding, Arithmetic coding, Discrete Cosine Transform, Differential PCM, Motion Compensated Prediction, Video Compression – JPEG, H.261, MPEG-1 Video, MPEG 2 and 3 Video, H.263, Wavelet and Fractal Image Compression, Audio Compression.

UNIT-V

Multimedia Networks: Basics of Multimedia Networks, Multimedia Network Communications and Applications : Quality of Multimedia Data Transmission, Multimedia over IP, Multimedia over ATM Networks, Transport of MPEG-4, Media-on-Demand(MOD).

Practical :

1. Script Writing and Story Boards. Hot Spots and Buttons, Layouts and designing of visuals, Basics of colors.
2. Adobe Photoshop – Introduction, Working with images, Image editing and cleaning, creating Web banner and page. Work with video and 3D Images.
3. Adobe Flash - Introduction, Creating shapes, Inserting text, Concepts of colors, layers, frames and timelines, Working with different symbols – Button, Movie clip & graphic
4. Creating Animation - Creating scenes and movie by different tween effect, testing and playing movie.
5. Working with Action script interface, Script Grammar and syntax, Loops and array, Method and events. Script for Timeline control
6. Assigning Actions to an Object, and a Button, Creating Loops, Generation Random Numbers, Creating a Function, Calling a Function, Controlling a Movie Clip's Color with Sliders, Drawing a Circle & Rectangle, Filling a Shape with a Gradient.

Reference Books:

- 1) Fundamentals of Multimedia by Ze-Nian Li and Mark S. Drew PHI/Pearson Education
- 2) Essentials ActionScript 2.0, Colin Mook, SPD O,REILLY.
- 3) Digital Multimedia, Nigel chapman and jenny chapman, Wiley-Dreamtech
- 4) Photoshop CS4 Bible, Stacy cates, Simon Abram, Dan Moughamian, Wiley Publishing, 2009.
- 4) Learning Flash CS4 Professional, Rich Shupe O,REILLY, 2009
- 6) Multimedia and communications Technology, Steve Heath, Elsevier(Focal Press)