

## **Six Months Course in Computer Graphics & Multimedia (NIELIT CERTIFIED)**

- ☐ Introduction to Multimedia
- ☐ Computer Fonts and Hypertext
- ☐ Audio fundamentals and representations
- ☐ Image Fundamentals and representations
- ☐ Video and Animation
- ☐ Multimedia Authoring

### **Introduction to Multimedia**

What is multimedia, Components of multimedia, Web and Internet multimedia applications,

Transition from conventional media to digital media.

### **Computer Fonts and Hypertext**

Computer Fonts and Hypertext Usage of text in Multimedia, Families and faces of fonts, outline fonts, bitmap fonts International character sets and hypertext, Digital fonts techniques.

### **Audio fundamentals and representations**

Digitization of sound, frequency and bandwidth, decibel system, data rate, audio file format, Sound synthesis, MIDI, wavetable, Compression and transmission of audio on Internet, Adding sound to your multimedia project, Audio software and hardware.

### **Image fundamentals and representations**

Colour Science , Colour, Colour Models, Colour palettes, Dithering, 2D Graphics, Image Compression and File Formats :GIF, JPEG, JPEG 2000, PNG, TIFF, EXIF, PS, PDF, Basic Image Processing [ Can Use Photoshop ], Use of image editing software, White balance correction, Dynamic range correction, Gamma correction, Photo Retouching

### **Video and Animation**

Video Basics , How Video Works, Broadcast Video Standards, Analog video, Digital video, Video Recording and Tape formats, Shooting and Editing Video (Use Adobe Premier for editing), Video Compression and File Formats. Video compression based on motion compensation, MPEG-1, MPEG-2, MPEG-4, MPEG-7, MPEG-21, Animation: Cell Animation, Computer Animation, Morphing,

### **Multimedia Authoring**

Multimedia Authoring Basics, Some Authoring Tools, Macromedia Director & Flash.