

## II YEAR – III SEMESTER

COURSE CODE: 7MCE3E3

### ELECTIVE COURSE-IV (C)–MULTIMEDIA SYSTEM

#### Unit I

Definition – Multimedia Hardware – Multimedia software – Multimedia Networking – Multimedia applications – Multimedia environments – Multimedia computer components – Multimedia standards – Multimedia PC.

#### Unit II

**Text :** Engineering Text – Positioning – Sizing – Editing – Fonts – Shadowing – Cloning – Building– Image and Graphics: Backdrops – Hanging Pictures – Positioning capturing and converting graphics – Compressing bitmaps – Controlling Palettes – Triggering – Hypertext – Hyper Picture – Buttons – Editing Links – Triggers in Backdrops – Analog Video – Digital Video – Digital Audio – Music – Animation – Operating Systems Support for Multimedia – CD Family – various CD Formats – CD-ROM Format.

#### Unit III

**Digital Audio Representation and Processing :** Digital representation of Sound – Transmission of digital sound – Digital Signal Processing of sound – Speech Recognition and Synthesis. Wave form Audio Recording – CD Audio Clip making – MIDI Sequencing Video Technology – Digital Video and Image Compression: Video Compression Technique – JPEG Image Compression Standards – MPEG Motion Video Compression standards – Various File storage – Digital Video Recording – Video Clip Making.

#### Unit IV

**File Standard for Internet :** SGML, HTML, XML – MIME – Voice Mail – Video Tele conferencing – Problems: Bandwidth – Performance measurement, Multimedia Presentation and Authoring Design Paradigms and User Interfaces – Multimedia Applications with case studies.

#### Unit V

**Virtual Reality :** Introduction – A generic VR system: Virtual environment – Technology – Modes of Interaction – VR Hardware: Sensor Hardware, Head Coupled displays – Acoustic hardware – Integrated VR – VR Software: Modeling Virtual worlds – Physical simulations – VR Applications.

**Text Books:**

1. Fred T.Hofstetter, "Multimedia Literacy", Mcgraw Hill 1995 (Unit I & II)
2. Simon J.Gibbs, Dionysios C.Tsichritziz, "Multimedia Programming" Addison Wesley 1995 (Unit II)
3. John F Koegel Buford, "Multimedia Systems" Addison Wesley 1994 (Unit III & IV)
4. John Vince, "Virtual Reality Systems" Addison Wesley 1995 (Unit V)

