**CT 785 03**

**Course Objectives:**  
This course covers three main objectives on multimedia system   these are devices, systems and applications.

1. **Introduction(5 hours)**
   1. Global structure of Multimedia
   2. Medium
   3. Multimedia system and properties

1. **Sound / Audio System(6 hours)**
   1. Concepts of sound system
   2. Music and speech
   3. Speech Generation
   4. Speech Analysis
   5. Speech Transmission

1. **Images and Graphics(5 hours)**
   1. Digital Image Representation
   2. Image and graphics Format
   3. Image Synthesis , analysis and Transmission

1. **Video and Animation(6 hours)**
   1. Video signal representation
   2. Computer Video Format
   3. Computer- Based animation
   4. Animation Language
   5. Methods of controlling Animation
   6. Display of Animation
   7. Transmission of Animation

1. **Data Compression(8 hours)**
   1. Storage Space
   2. Coding Requirements
   3. Source, Entropy and Hybrid Coding
   4. Lossy Sequential DCT- based Mode
   5. Expanded Lossy DCT-based Mode
   6. JPEG and MPEG

1. **User Interfaces(5 hours)**
   1. Basic Design Issues
   2. Video and Audio  at the User Interface
   3. User- friendliness as the Primary Goal

1. **Abstractions for programming(5 hours)**
   1. Abstractions Levels
   2. Libraries
   3. System Software
   4. Toolkits
   5. Higher Programming Languages
   6. Object –Oriented approaches
2. **Multimedia Application(5 hours)**
   1. Media preparation and composition
   2. Media integration and communication
   3. Media Entertainment

**References:**

1. Multimedia: Computing, Communications and Applications, Ralf Steinmetz and Klara Nahrstedt, Pearson Education Asia
2. Multimedia Communications, Applications, Networks, Protocols and   Standards, Fred Halsall, Pearson Education Asia
3. Multimedia Systems, John F. Koegel Buford, Pearson Education Asia

**Evaluation Scheme:**  
The questions will cover all the chapters of the syllabus. The evaluation scheme will be as indicated in the table below:

|  |  |  |
| --- | --- | --- |
| **Chapters** | **Hours** | **Marks Distribution\*** |
| 1 | 5 | 9 |
| 2 | 6 | 10 |
| 3 | 5 | 9 |
| 4 | 6 | 11 |
| 5 | 8 | 14 |
| 6 | 5 | 9 |
| 7 | 5 | 9 |
| 8 | 5 | 9 |
| **Total** | **45** | **80** |

\*There could be a minor deviation in Marks distribution