

<b>Course Code: CSOE-6</b>	<b>Course Title:</b> Computer Multimedia and Animations
Course Credits: 03	Hours / Week : 03
Total Contact Hours: 42	Formative Assessment Marks:40
Exam Marks:60	Exam Duration: 02 hrs.

### Course Outcomes:

This Course emphasis on Multimedia Basic Tools and various techniques. It includes hand-on Practices to improve and develop the skills in Animation and Videos. The Multimedia is the high scope and requirements in all the disciplines, in developing teaching aids and other presentations.

### Course Content

Content	Hours
<b>Unit - 1</b>	
<b>Introduction to Multimedia:</b> History of Multimedia, its market – Content copyright – Resources for multimedia developers – Types of produces – Evaluation – Hardware Architecture – OS and Software – Multimedia Architecture – Software library – Drivers.	6
<b>Unit - 2</b>	
<b>Computer Fonts and Hypertext:</b> Usage of text in Multimedia, Families and faces of fonts, outline fonts, bitmap font International character sets and hypertext, Digital fonts techniques. Text file formats and Compression techniques.	6
<b>Unit - 3</b>	
<b>Image fundamentals and representations</b> (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.	10
<b>Unit - 4</b>	
<b>Audio fundamentals and representations</b> (Digital Audio : Audio software and hardware, ) ( Characteristics of sound and Digital audio Digitization of sound, frequency and bandwidth, decibel system, data rate, ) ( audio file format), (Sound synthesis, MIDI, wavetable, Digital Audio systems) , (Audio file formats – Using Audio in Multimedia) (Applications – Audio for content. ) ( Compression and transmission of audio on Internet, Adding sound to your multimedia project)	10

Unit – 5	
<b>Video and Animation</b> (Video Basics , Video software and hardware), (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. Video capture and playback systems.	10

**Reference:**

- 1 Tay Vaughan, “Multimedia making it work”, Tata McGraw-Hill, 2008.
2. Rajneesh Aggarwal & B. B Tiwari, “Multimedia Systems”, Excel Publication, New Delhi, 2007.
3. Li & Drew, “ Fundamentals of Multimedia” , Pearson Education, 2009.
4. Parekh Ranjan, “Principles of Multimedia”, Tata McGraw-Hill, 2007 2. Anirban Mukhopadhyay and Arup Chattopadhyay, “Introduction to Computer Graphics and Multimedia”, Second Edition, Vikas Publishing House
2. The book of Audacity : record, edit, mix, and master with the free audio editor  
Schroder, Carla. San Francisco : No Starch Press; c2011
3. Creating DSLR video : from snapshots to great shots  
Harrington, Richard, 1972-Berkeley, CA : Peachpit Press; 2012

**ASSESSMENT FOR THE OPEN ELECTIVE COURSES**

The open elective courses offered to other department for the UG candidates are all 3 credit courses and the total marks allotted for these courses are 100.

The 100 marks are further subdivided in to 40 for CA and 60 for semester examination. The 40 marks for the CA are further trifurcated as given below: (i) One activity for 10 marks within 7 weeks of starting the course (ii) One test for 20 marks (ii) one activity for 10 marks within 12 weeks of starting the course. The schedule of test / activity must be announced to the students by the 5th week of the semester. The test / activity can be organised by the subject teacher and can be conducted in microsoft teams. If the teachers want to give a third activity, it will be in lieu of the first or second activity.

The Semester Examination will be conducted for 60 marks and for a duration of 2 hours. It will be MCQ pattern.