CSH516: Multimedia and its Applications

Teaching Scheme	Examination Scheme
Lectures: 4 hrs/Week Tutorials: 2 hr/Week Credits: 6	Class Test -20 Marks Teachers Assessment – 10 Marks Attendance – 20 Marks End Semester Exam – 100 marks

Prerequisite: - Data Structure, Design and Analysis of Algorithms, Discrete Mathematics.

Course Objectives:

1. Introduce to the students the characteristics and design methodologies of Multimedia
2. Expose students to theoretical and fundamental concepts of multimedia, its applications and the techniques involved
3. Help students learn the issues involved in capturing, processing, manipulating, storing, and retrieving various kinds of continuous media.
4. To understand the image creation.
5. To work on animation and video.

Detailed Syllabus

Unit-1

Introduction to Multimedia: Definition of Multimedia, CD-ROMs and Multimedia applications. Multimedia requirements-Hardware, Software, Creativity and organization, Multimedia skills and training.

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Unit-2 **Multimedia Hardware:** Hardware requirement for multimedia, Macintosh verses PC. The Macintosh platform, PC platform, Connections, Memory and storage devices, input devices, output hardware, Communication devices.
Unit-3 **Multimedia Software:** Basic tools, painting and drawing tools, OCR software, Sound editing programs, Animation devices and digital movies and other accessories, Linking multimedia objects, office suites, word processor, spreadsheets presentation tools, Types of authoring tools card and page-based, Icon based and time based authoring tools, Object oriented tools.
Unit-4 **Multimedia Software :** Basic tools, painting and drawing tools, OCR software, Sound editing programs, Animation devices and digital movies and other accessories, Linking multimedia objects, office suites, word processor, spreadsheets presentation tools, Types of authoring tools card and page-based, Icon based and time based authoring tools, Object oriented tools.
Unit-5 **Production Tips:** Image-creation, making still images, images colors, Image, File format, image editing.
Unit-6 **Animation and video:** Animation-principals of animation, making workable animations, Video, using video, Broadcast video, standard, integrating computer and TVs, shooting and editing video, using recording formats, Video tips.
Text and Reference Book 1. Multimedia Making It Work, Tay Vaughan, TMH, 5th Edition. 2. Multimedia Power Tools, Peter Jerram, M. Gosney, Random House Electronics Publishing, 2nd Edition

Course Outcomes:

After completing the course, students will be able to:

1. Identify different media; representations of different multimedia data and data formats.
2. Analyze various compression techniques.
3. Compare various audio and video file formats.
4. Apply different coding technique for solving real world problems
5. Choose optical storage media suitable for multimedia applications.
6. Apply concept Natural Language processing to problems leading to understanding of cognitive computing.

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