MULTIMEDIA COMMUNICATION

B.E., VII Semester, Electronics & Communication Engineering/ Telecommunication Engineering

[As per Choice Based credit System (CBCS) Scheme

Course Code	**17EC741**	**CIE Marks**	**40**
Number of Lecture Hours/Week	**03**	**SEE Marks**	**60**
Total Number of Lecture Hours	**40 (08 Hours / Module)**	**Exam Hours**	**03**

CREDITS – 03

Course objectives: This course will enable students to:

- Gain fundamental knowledge in understanding the basics of different multimedia networks and applications.
- Understand digitization principle techniques required to analyze different media types.
- Analyze compression techniques required to compress text and image and gain knowledge of DMS.
- Analyze compression techniques required to compress audio and video.
- Gain fundamental knowledge about multimedia communication across different networks.

Module-1

Multimedia Communications: Introduction, Multimedia information representation, multimedia networks, multimedia applications, Application and networking terminology. (Chap 1 of Text 1) **L1, L2**

Module-2

Information Representation: Introduction, Digitization principles, Text, Images, Audio and Video (Chap 2 of Text 1) **L1, L2**

Module-3

Text and image compression: Introduction, Compression principles, text compression, image Compression. (Chap 3 of Text 1)

Distributed multimedia systems: Introduction, main Features of a DMS, Resource management of DMS, Networking, Multimedia operating systems (Chap. 4 - Sections 4.1 to 4.5 of Text 2). **L1, L2, L3**

Module-4

Audio and video compression: Introduction, Audio compression, video compression, video compression principles, video compression. (Chap. 4 of Text 1). **L1, L2, L3**

Module-5

Multimedia Communication Across Networks: Packet audio/video in the network environment, Video transport across generic networks, Multimedia Transport across ATM Networks (Chap. 6 - Sections 6.1, 6.2, 6.3 of Text 2). **L1, L2**

Course Outcomes: After studying this course, students will be able to:

- Understand basics of different multimedia networks and applications.
- Understand different compression techniques to compress audio and video.
- Describe multimedia Communication across Networks.
- Analyse different media types to represent them in digital form.
- Compress different types of text and images using different compression techniques and analyse DMS.

Text Books:

1. Fred Halsall, "Multimedia Communications", Pearson education, 2001 ISBN - 9788131709948.

2. K. R. Rao, Zoran S. Bojkovic, Dragorad A. Milovanovic, "Multimedia Communication Systems", Pearson education, 2004. ISBN -9788120321458

Reference Book:

Raifsteinmetz, Klara Nahrstedt, "Multimedia: Computing, Communications and Applications", Pearson education, 2002. ISBN -9788177584417

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