GUJARAT TECHNOLOGICAL UNIVERSITY

B E SEMESTER VIII
INFORMATION AND COMMUNICATION TECHNOLOGY ENGINEERING

Subject Name: **Multimedia Computing**

Subject code :   **183201**

Teaching Scheme				Evaluation Scheme			
Theory	**Tutorial**	**Practical**	**Total**	**University Exam (E)**		**Mid Sem Exam (Theory) (M)**	**Practical (Internal)**
				Theory	**Practical**		
4	0	2	6	70	30	30	20

Sr No	Course contents
1	**Introduction To Multimedia Systems** Define Multimedia Signal, Elements Of Multimedia Communication Systems, Challenges Involved With Multimedia Communication, Types Of Multimedia(Image, Text, Audio, Video)
2	**Image Compression Systems** Fundamentals of Image, Redundancy In Image, Lossless And Lossy Image Compression Techniques, Measurements Quality of Reconstructed Image (MSE, SNR, PSNR) , Huffman Coding, GIF,TIFF,JPEG
3	**Text Compression** Compression Principles, Entropy And Source Encoding, Static Huffman Coding, Dynamic Huffman Coding, Arithmetic Coding, LZW Coding,
4	**Audio-Video Compression** Audio Compression, PCM, DPCM, ADPCM, Adaptive Predictive Coding, Linear Predictive Coding, Code-Excited Coding, Perceptual Coding, Mpeg Audio Coder, Digital Video Coding Fundamentals, Video Compression

	Principles, Video Compression Standards
5	**APPLICATIONS OF MULTIMEDIA NETWORKS**

Text and Reference Books:

1   Title: Multimedia Communications: Application ,Network, Protocols
   and Standards
Author: Fred Halsall
Publisher: Pearson Education Asia

2   Title: Digital image processing
Author: Rafael C. Gaonzalez and Richard E. Woods
Publisher: pearson Education

3   Title: Data Compression :The Complete Reference
Author: David Salomon
Publisher: Springer International Edition