

# GOPALAN COLLEGE OF ENGINEERING AND MANAGEMENT

Department of Electronics and Communication Engineering

Academic Year: **2016-17**

Semester: **EVEN**

## COURSE PLAN

Semester: **VII**

Subject Code& Name: **10EC841 & MULTIMEDIA COMMUNICATIONS**

Name of Subject Teacher: **Sunitha.K**

Name of Subject Expert (Reviewer): **Kavitha M V**

For the Period: From: 30-01-17 to 21-05-17

Details of Book to be referred:

Text Books	1. <b>Multimedia Communications: Applications, Networks, Protocols and Standards</b> , Fred Halsall, Pearson Education, Asia, Second Indian reprint 2002
Reference Books	1. <b>Multimedia Information Networking</b> , Nalin K. Sharda, PHI, 2003. 2. <b>“Multimedia Fundamentals: Vol 1 - Media Coding and Content Processing”</b> , Ralf Steinmetz, Klara Narstedt, Pearson Education, 2004. 3. <b>“Multimedia Systems Design”</b> , Prabhat K. Andleigh, Kiran Thakrar, PHI, 2004.

Lecture NO	Topic Planned	Practical Applications & Brief objectives	Book referred with Pg No.	Planned Date	Executed Date	Deviation Reasons thereof	How Made Good / Reciprocate arrangement	Remarks by HOD
1.	<b>Introduction to syllabus</b>			06-2-17				
2.	<b>Unit 1: MULTIMEDIA COMMUNICATIONS: Multimedia Information</b>	<b>Objectives:</b> To discuss in brief about multimedia	24	06-2-17				

	Representation	communications and networks.							
3.	Multimedia networks.	<b>Outcomes:</b> the student will be able to define multimedia communication and brief about the networks. <b>Applications:</b> Information systems: electronic publishing, hospital information systems, navigation and information systems, museums	25-33	07-2-17					
4.	Multimedia networks.		25-33	08-2-17					
5.	Multimedia networks.		25-33	09-2-17					
6.	Multimedia networks.		25-33	13.02.17					
7.	Multimedia Applications		34	14.02.17					
8.	Media Types		53	15.02.17					
9.	Communication Modes		54-55	16.02.17					
10.	Network Types		56-61	20.02.17					
11.	Multipoint Conferencing		61-63	21.02.17					
12.	Network QoS		63-69	22.02.17					
13.	Network QoS		63-69	23.02.17					
14.	Application QoS		63-69	23.02.17					
15.	<b>Unit 2: MULTIMEDIA INFORMATION REPRESENTATION:</b> Digitization Principles Analog Signals , Encoder design, Decoder Design		<b>Objectives:</b> to discuss about multimedia information representation types. <b>Outcomes:</b> the student will be able to brief the representation methods and concepts. <b>Applications:</b> (Remote)	79-86	27.02.17				
16.	TEXT Formatted/unformatted/ Hypertext			89-95	28.02.17				

17.	TEXT Formatted/unformatted/ Hypertext	representation: conferencing applications, distance learning, remote robotic agents etc	89-95	01.03.17					
18.	IMAGES Graphics, Digitized documents,		96-109	02.03.17					
19.	Digitized pictures, Aspect Ratio		96-109	02.03.17					
20.	AUDIO PCM Speech , CD Quality Audio,		110-116	06.03.17					
21.	Synthesized audio		110-116	07.03.17					
22.	VIDEO Broadcast Television ,		118-124	08.03.17					
23.	Digital Video		124-126	09.03.17					
24.	Digital Video		124-126	09.03.17					
25.	<b>Unit 5: MULTIMEDIA INFORMATION NETWORKS</b> LANs ,Ethernet		<b>Objectives:</b> to discuss the multimedia information networks and working operation. <b>Outcomes:</b> the student will be able to brief the multimedia information networks, types and working operation. <b>Applications:</b> Entertainment: digital television, video--on-demand, widely distributed interactive games etc	474-484	13.03.17				
26.	Token Ring			485-499	14.03.17				
27.	Bridge	500-515		15.03.17					
28.	FDDI	516-528		16.03.17					
29.	FDDI	516-528		16.03.17					
30.	High Speed LAN	531-542		20.03.17					

31.	High Speed LAN		531-542	21.03.17				
32.	LAN Protocol		544-549	22.03.17				
33.	<b>Unit 6: THE INTERNET</b> IP Datagram	<p><b>Objectives:</b> to discuss about the internet and functioning.</p> <p><b>Outcomes:</b> the student will be able to brief about internet and functioning.</p> <p><b>Applications:</b> e-mail, file transfer, remote login, WWW, file sharing (P2P systems such as E-mule, etc), Skype, and VoIP based applications, teleconference applications (e.g., NetMeeting, WebEx, etc.).</p>	564-571	23.03.17				
34.	IP Address		573-577	23.03.17				
35.	IP Address		573-577	27.03.17				
36.	ARP and RARP		578-581	28.03.17				
37.	ARP and RARP		578-581	30.03.17				
38.	QoS, PPP Protocol		629-635	03.04.17				
39.	IPv6 , IPv6		639-654	04.04.17				
40.	Unit 7: BROADBAND ATM NETWORKS: Cell Format		<p><b>Objectives:</b> to discuss about broadband ATM networks and architecture.</p> <p><b>Outcomes:</b> the student will be able to brief about broadband ATM networks and architecture...</p> <p><b>Applications:</b> High-Performance Computing, High-Capacity Storage, and High-Speed Communication</p>	670-673	05.04.17			
41.	Cell Format	670-673		06.04.17				
42.	Switch Architecture	673-678		06.04.17				
43.	Switch Architecture	673-678		10.04.17				
44.	Protocol Architecture	679-688		11.04.17				
45.	Protocol Architecture	679-688		12.04.17				

46.	ATM LANs		689-695	13.04.17				
47.	Unit 3: TEXT and IMAGE COMPRESSION: Compression Principles	<p><b>Objectives:</b> to discuss about the text and image compression and the principles</p> <p><b>Outcomes:</b> the student will be able to explain the applications and how text and image compression is used.</p> <p><b>Applications:</b> Short Message Service (SMS), satellite imagery mini discs, MP3 technology, fax, digital cameras etc</p>	139-145	13.04.17				
48.	Compression Principles		139-145	20.04.17				
49.	TEXT COMPRESSION Static Huffman Coding, lempel ziv		146-152	24.04.17				
50.	Dynamic Huffman Coding Arithmetic Coding		152-160	25.04.17				
51.	IMAGE COMPRESSION		163-172	26.04.17				
52.	IMAGE COMPRESSION		163-172	27.04.17				
53.	JPEG Decoding		172-187	02.05.17				
54.	Unit 4: AUDIO AND VIDEO COMPRESSION: Audio Compression	<p><b>Objectives:</b> to discuss about the audio and video compression and the principles.</p> <p><b>Outcomes:</b> the student will be able to explain the applications and how audio and video compression is used.</p> <p><b>Applications:</b> DVD technology, modems, wireless telephony, database design storage and</p>	195-198	03.05.17				
55.	Adaptive predictive coding		199-201	04.05.17				
56.	Linear predictive coding, Code LPC,		201-203	04.05.17				
57.	Perceptual Coding		203-207	08.05.17				
58.	MPEG & Dolby Audio coders		207-212	09.05.17				
59.	Video Compression Principles		212-224	10.05.17				

60.	H.261 ,H.263 ,MPEG	transmission of CT and MRI scans, mammography, etc	225-237	11.05.17				
61.	MPEG- 1, MPEG- 2, MPEG- 4		237-255	11.05.17				
62.	Unit 8: <b>TRANSPORT PROTOCOL: TCP/IP Protocol Suite</b>	<b>Objectives:</b> to discuss about transport protocol and applications. <b>Outcomes:</b> the student will be able to explain transport protocol and applications <b>Applications:</b> File transfer, Remote login to hosts, Electronic mail transport, Networking support.	791-823	18.05.17				
63.	TCP/IP Protocol Suite		791-823	22.05.17				
64.	UDP		836-840	23.05.17				
65.	UDP		836-840	24.05.17				
66.	RTP		842-844	24.05.17				
67.	TCP/IP Protocol Suite		844-846	25.05.17				
68.	Unit 1:MULTIMEDIA COMMUNICATIONS: revision			29.05.17				
69.	Unit 2: MULTIMEDIA INFORMATION REPRESENTATION: revision			30.05.17				
70.	Unit 5: MULTIMEDIA INFORMATION NETWORKS: revision			31.05.17				
71.	Unit 6: THE INTERNET: revision			01.06.17				
72.	Unit 7: BROADBAND ATM NETWORKS: revision			01.06.17				

Prepared By: Sunitha.K  
(Faculty)  
Date & Sign \_\_\_\_\_

Reviewed by: \_\_\_\_\_  
(Sub. expert)  
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(HOD)  
Date & Sign \_\_\_\_\_

Approved by: \_\_\_\_\_  
(Principal/ Acad. Co)  
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