SREE VIDYANIKETHAN ENGINEERING COLLEGE (AUTONOMOUS)
SREE SAINATH NAGAR, A. RANGAMPET-517 102

Department of Computer Science & Engineering

Lesson Plan cum Diary 2015-16

Name of the Subject : Advanced Computer Networks (14MT10501)
Name of the faculty Member : Mr.N.Papanna
Class & Semester : M.Tech I Semester (CN&IS)

S. No.	Topic	No. of periods required	Date(s) covered	No. of periods used	Book(s) followed	Topics for self study
	Unit-I					
1.	**Review of Computer Networks and the Internet:** The Network edge, The Network core , Access Networks and Physical media	3			T2	Networking and Internet Access Devices, Switching and Routing Devices
2.	ISPs and Internet Backbones, Delay and Loss in Packet,	2			T2	
3.	Packet-Switched Networks.	1			T2	
4.	**Foundation of Networking Protocols:** 5-layer TCP/IP Model	1			T1	
5.	7-Layer OSI Model	1			T1	
6.	Internet Protocols and Addressing	1			T1	
7.	Equal-Sized Packets Model: ATM.	2			T1	
	Total no of periods required:	**11**	**Total no of periods used:**			
	Unit-II					
8.	**The Link Layer and Local Area Networks:** Link Layer Introduction and Services	1			T2	Classification of MAC protocols, Contention-Access MAC
9.	Error-Detection and Error-Correction techniques	1			T2	
10	Multiple Access Protocols, Link Layer Addressing	1			T2	
11	Ethernet, Interconnections: Hubs and Switches	1			T2	
12	PPL: The point-to-point Protocol, Link Virtualization	1			T2	
13	**Routing and Internet Working :** Network Layer Routing , Least-Cost-Path algorithms	2			T1	
14	Non-Least-Cost-Path algorithms	2			T1	
15	Intra domain Routing Protocols	1			T1	
16	Inter domain Routing Protocols	1			T1	
	Total no of periods required:	**11**	**Total no of periods used:**			
	Unit-III					
17	**Internet Protocol:** Internetworking	1			T2	Security Methods,

18	IPv4	1			T2	Secret-Key Encryption protocols , Public-Key Encryption protocols
19	IPv6, Transition from IPv4 to IPv6	1			T2	
20	**Transport and End-to-End Protocols:** Transport Layer	1			T1	
21	Transmission Control Protocol	2			T1	
22	User Datagram Protocol (UDP)	2			T1	
23	TCP Congestion Control.	2			T1	
	Total no of periods required:	**10**	Total no of periods used:			
UNIT – IV						
24	**Wireless Networks and Mobile IP :** Infrastructure of Wireless Networks	1			T1	Intra Domain Multicast protocols- DVMRP, IGMP, PIM Inter Domain multicast protocols- MBGP , MSDP
25	Wireless LAN Technologies	2			T1	
26	IEEE 802.11 Wireless Standards	2			T1	
27	Wireless Mesh Networks (WMNs).	2			T1	
28	**Optical Networks and WDM Systems**: Overview of Optical Networks	1			T1	
29	Basic Optical Networking Devices	1			T1	
30	Large-Scale Optical Switches	1			T1	
31	Optical Routers	1			T1	
Total no of periods required:		**11**	**Total no of periods used:**			
UNIT- V						
32	**VPNs, Tunneling and Overlay Networks:** Virtual Private Networks (VPNs)	1			T1	VoIP, Multimedia Networking, Real Time media Transport protocols, Distributed Media networking
33	Multiprotocol Label Switching (MPLS)	1			T1	
34	Overlay Networks.	1			T1	
35	**Mobile Ad-Hoc Networks:** Overview of Wireless Ad –Hoc Networks	1			T1	
36	Routing in Ad -Hoc Networks	1			T1	
37	Routing Protocols for Ad-Hoc Networks- DSDV , DSR,AODV	2			T1	
38	**Wireless Sensor Networks**: Sensor Networks and Protocol Structures	1			T1	
39	Communication Energy Model	1			T1	
40	Clustering Protocols	1			T1	
41	Routing Protocols	2			T1	
Total no of periods required:		**12**	**Total no of periods used:**			
Grand total of periods required:		**55**	**Grand total of periods used:**			

TEXT BOOKS:

1: Nader F. Mir, "Computer and Communication Networks," Pearson Education, 2007

2: F. Kurose, Keith W.Ross, "Computer Networking: A Top-Down Approach Featuring the Internet," , Pearson Education, Third Edition, 2007

REFERENCE BOOKS:

1: Behrouz,A. Forouzan, "Data Communications and Networking," Tata McGraw Hill,

Fourth Edition, 2007.
2: AndrewS. Tanenbaum,, “Computer Networks,” Fourth Edition, Prentice Hall.
3: S.Keshav,, “An Engineering Approach to Computer Networking,” ,Pearson Education.

Signature of the Faculty Member

Signature of the HOD