SREE VIDYANIKETHAN ENGINEERING COLLEGE

(AUTONOMOUS)

SREE SAINATH NAGAR, TIRUPATI – 517 102

Department of Computer Science and Engineering

Lesson Plan cum Diary 2015'16

Name of the Subject : Mobile Computing (14MT20508)
Class & Semester : M.Tech(CNIS) – I Semester
Name of the faculty Member : Ms. S. Vijayalakshmi

S. No.	Topic	No. of periods required	Date(s) covered	No. of periods used	Book(s) followed	Topics for self study
UNIT – I: GSM AND SIMILAR ARCHITECTURES & WIRELESS MAC AND CDMA – BASED COMMUNICATION						
1	**GSM and Similar Architectures:** GSM-Services	1			T1	Concepts related to Wireless Transmission such as Frequencies for radio transmission, signals, antennas, signal propagation, multiplexing, Modulation, spread spectrum, and cellular systems.
2	System Architecture	1			T1	
3	Radio Interface, Protocols	1			T1	
5	Localization, Calling	1			T1	
6	Handover	1			T1	
7	Security, New Data Services	1			T1	
8	**Wireless MAC and CDMA – Based Communication:** Medium Access control	1			T1	
9	Introduction to CDMA-based Systems	1			T1	
10	Spread Spectrum in CDMA Systems	1			T1	
11	Coding Methods in CDMA	1			T1	
	Total periods required:	**10**				
UNIT – II: MOBILE IP NETWORK LAYER & MOBILE TRANSPORT LAYER						
12	**Mobile IP Network Layer:** IP and Mobile IP Network Layer	1			T1	High performance local area networks-WATM,BRAN,HiperLAN2
13	Packet Delivery and Handover Management	1			T1	
14	Location Management, Registration	1			T1	
15	Tunneling and Encapsulation	1			T1	
16	Route Optimization, DHCP	1			T1	

18	**Mobile Transport Layer:** Conventional TCP/IP Transport Layer Protocols	1			T1	
19	Indirect TCP, Snooping TCP	1			T1	
20	Mobile TCP, WAP Architecture	2			T1	
21	Congestion Control at Network Layer.	1			T1	
	Total periods required:	**10**				
UNIT –III: DATABASES AND DATA DISSEMINATION AND BROADCASTING SYSTEMS						
22	**Databases:** Database Hoarding Techniques	2			T1	Digital Audio and Video Broadcasting Systems
23	Data Caching	2			T1	
24	Client-Server Computing and Adaptation	1			T1	
25	Transaction Models, Query Processing,	1			T1	
26	Data Recovery Process, Issues Relating to Quality Of Service	1			T1	
27	**Data Dissemination and Broadcasting Systems:** Communication Asymmetry	1			T1	
28	Classification of Data-Delivery Mechanisms	1			T1	
29	Data Dissemination Broadcast Models	1			T1	
30	Selective Tuning and Indexing Techniques.	1			T1	
	Total periods required:	**11**				
UNIT – IV: MOBILE SYNCHRONIZATION IN MOBILE COMPUTING SYSTEMS AND MOBILE DEVICES: SERVER AND MANAGEMENT						
31	**Data Synchronization in Mobile Computing Systems:** Synchronization	1			T1	Wap2.0 and Zigbee
32	Synchronization Software for Mobile Devices	1			T1	
33	Synchronization Protocols	1			T1	
34	SynML-Synchronization Language for Mobile Computing	2			T1	

35	Sync4J (Funambol), Synchronized Multimedia Markup Language (SMIL)	1			T1	
36	**Mobile Devices: Server and Management -** Mobile Agent,	1			T1	
37	Application Server	1			T1	
38	Gateways, Portals	1			T1	
39	Service Discovery,Device Management	1			T1	
40	Mobile File Systems, Security	1			T1	
	Total periods required:	**11**				
UNIT – V: MOBILE APPLICATION LANGUAGES- XML, JAVA, J2ME,& JAVACARD AND MOBILE OPERATING SYSTEMS						
41	**Mobile Application Languages- XML, JAVA, J2ME and JavaCard :** Introduction, XML,	2			T1	Extensible Hyper Text Markup Language Mobile Profile(XHTML – MP)
42	JAVA,	1			T1	
43	Java 2 Micro Edition (J2ME), JavaCard	1			T1	
44	**Mobile Operating Systems:** Operating System,	1			T1	
45	Palm OS,	2			T1	
46	Windows CE,	2			T1	
47	Symbian OS, Linux for Mobile Devices	2			T1	
	Total periods required:	**11**				
	Grand total periods required:	**53**				

TEXT BOOKS:

T1. Raj Kamal, *"Mobile Computing",* OXFORD University Press, 2nd Edition, 2007

REFERENCE BOOKS:

R1. Jochen H. Schiller *"Mobile Communications",* Pearson Education, 2nd Edition, 2004
R2. Asoke Talukder, Roopa Yavagal *"Mobile Computing",* Tata McGraw Hill, 2nd Edition 2010

Signature of the faculty Member **Signature of the HOD**