

COURSE PLAN

Name of the Course Teacher : Rajesh Ishwar
 Subject : Mobile communication systems
 Branch: IT Semester: II Year: III
 Course Code: EC 314 L-T-P-C: 3-0-0-3 w.e.f. 29.12.2009

Sr. No.	Topic	Contact Hours (Lectures)
1.	Wireless transmission , frequencies for radio transmission, Signals , antennas , signal propagation	1
2.	Multiplexing: space division, frequency division, time division, code division	1
3.	Modulation: ASK, FSK, PSK, multi carrier modulation	1
4.	spread spectrum: DSSS, FHSS	1
5.	Cellular systems , Medium access control , specialized MAC,	1
6.	SDMA , FDMA , TDMA	1
7.	Aloha , CSMA collision avoidance , polling	1
8.	CDMA , Spread Aloha multiple access, Comparison of S/T/F/CDMA	1
9.	Telecommunication Systems: GSM- Mobile services , system architecture , radio interface	1
10.	protocols , localization and calling , handover ,security	1
11.	satellite systems- basics, routing, localization, handover	1
12.	GEO, LEO, MEO	1
13.	broadcast systems- digital audio broadcasting	1
14.	digital video broadcasting	1
15.	Wireless LAN: Infrared Vs radio transmissions , infrastructure and adhoc networks ,	1
16.	IEEE 802.11 – system architecture, protocol architecture,	1
17.	physical layer, MAC layer	1
18.	MAC frames, MAC management	1
19.	802.11b, 802.11a	1
20.	Bluetooth- architecture , radio layer, base band layer	1
21.	Link manager protocol	1
22.	L2CAP, SDP	1
23.	IEEE 802.15, IEEE 802.15.4- low rate WPANs	1
24.	Mobile network layer , mobile IP- goals, assumptions and requirements, entities and terminology	1
25.	IP packet delivery , registration , tunneling and encapsulation,	1
26.	Optimizations, reverse tunneling, IPv6	1
27.	IP micro mobility support, cellular IP, HAWAII,	1
28.	Hierarchical mobile IPv6, dynamic host configuration protocol	1

29.	Mobile ad-hoc networks: Routing algorithms- Destination sequence distance vector	1
30.	Dynamic Source Routing , alternative metrics	1
31.	Ad-hoc routing protocols- flat ad-hoc routing, Hierarchical ad-hoc routing, geographic-position –assisted ad-hoc routing	1
32.	Mobile transport layer ,TCP , indirect TCP , snooping TCP ,	1
33.	mobile TCP , fast retransmission/fast recovery , transmission / time-out freezing,	1
34.	selective retransmission, transaction oriented TCP , TCP over 2.5/3.5G wireless networks	1
35.	Support for mobility , file systems , WWW , HTTP, HTML	1
36.	WAP , architecture , datagram protocol	1
37.	transport security , transaction protocol ,	1
38.	session protocol , application environment	1
39.	WML, WML script	1
40.	Wireless telephony application	1
	Total	40

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