

Lecture Plan

Name of teacher : Dr. Neelam Turk
Name of Subject: Wireless mobile communication(E16C-606)
Class: M.Tech (ECE)
Semester: II Sem

Unit/Section No.	Name of Topic	Number of Lectures Required
	Introduction to mobile radio systems(1G,2G,3G,4G)	02
	Paging systems, cordless telephone system	02
	Cellular concept, frequency reuse, channel assignment strategies	03
	Interference and system capacity	02
	trunking and grade of service	02
	cell splitting, sectoring, microcell zone concept.	01
	HO Strategies	02
2	Mobile radio propagation: mechanism, free space path loss, log-distance path loss models	03
	Okumara model, Hata model, PCS model, Wideband PCS microcell model	02
	indoor propagation models, Jake's channel model,	02
	Multi path characteristics of radio waves, signal fading, Time dispersion, Doppler spread, coherence time LCR, fading statistics	03
	diversity techniques	02
3	Introduction to spread spectrum communication, multiple access techniques used in mobile wireless communication:FDMA/TDMA/CDMA	02
	Cellular CDMA, packet radio protocols, CSMA, reservation protocols	02
	capacity of cellular CDMA, soft HO	02
4	Wireless systems and standards: GSM standards	02
	signaling and call control, mobility management, location tracing,	02
	wireless data networking, packet	02

	error modeling on fading channels	
	Performance analysis of link and transport layer protocols over wireless channels	02
	mobile data networking(mobile IP), wireless data services, IS-95, GPRS	03

Total lecture:

43

Text Books:

1. T. S. Rappaport, "wireless Communications: Principles and practices", PHI 1996.
2. William C. Y. Lee, "Mobile Cellular Telecommunications, Analog and Digital Systems", 2nd ed, MGH-1995.

Reference Books:

1. Kaveh Pahlavan & Allen H. Levesque, "Wireless Information Networks", Wiley series in Telecommunications and signal processing.
2. Kamilo Feher: Wireless Digital communications, Modulation and Spread Spectrum Applications PHI 2001.