

Lecture Plan
Wireless Communication (IEC-605)

Units	Lecture	Topics to Cover
Unit 1		Evolution of wireless systems:
	Lecture 1	Introduction to 1G, 2G
	Lecture 2	3G & 4G systems,
	Lecture 3	RF propagation, reflection,
	Lecture 4	diffraction, scattering,
	Lecture 5	propagation models, multipath fading, types of fading
	Lecture 6	Assignment 1/ Surprise Test 1
Unit 2		Mobile Communication concepts
	Lecture 1	Mobile channels description,
	Lecture 2	mobile call, frequency reuse,
	Lecture 3	handoff strategies,
	Lecture 4	co channel interference
	Lecture 5	adjacent channel interferences,
	Lecture 6	improving coverage and capacity in cellular systems,
	Lecture 7	cell splitting, sectoring, and microcell zone
	Lecture 8	Quiz 1
	Lecture 9	Assignment 2
	Lecture 10	Surprise Test 2
Unit 3		Multiple access techniques
	Lecture 1	SDMA, FDMA,
	Lecture 2	TDMA, CDMA,
	Lecture 3	spectrum efficiency
	Lecture 4	Wireless networks: ATM, Paging,
	Lecture 5	WLL, Bluetooth,
	Lecture 6	RFID & Cognitive radio
	Lecture 7	Assignment 3
	Lecture 8	Quiz 2
Unit 4		Wireless Systems & Standards
	Lecture 1	GSM,
	Lecture 2	personal satellite communication system,
	Lecture 3	CDMA2000,
	Lecture 4	WCDMA,
	Lecture 5	3G systems, UMTS
	Lecture 6	Assignment 4
Unit 5		Traffic Engineering
	Lecture 1	Network traffic load and parameters,
	Lecture 2	grade of service and blocking probability,
	Lecture 3	Markov processes, birth-death processes,
	Lecture 4	Poisson arrival process, holding time of calls,
	Lecture 5	blocking models and loss estimates,
	Lecture 6	lost calls cleared systems with infinite and finite subscribers,
	Lecture 7	lost calls returned systems and lost calls held system,
	Lecture 8	Delay systems and Erlang C formula.

Teacher:

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