Lesson Plan

Name of Faculty: Suresh Jindal
Discipline: Electronics & Comm. Egg.
Semester: 4th
Subject: CS

Week	Theory		Practical	
	Lecture Day	Topic (Including Assignment/ Test)	Practical Day	Topic
1st	1	Classification of transmitters on the basis of modulation, service	1	Introduction to Communication lab
	2	Classification of transmitters on the basis of frequency and power		
	3	Block diagram of AM transmitters and working of each stage		
2nd	4	Block diagram and working principles of reactance FET	2	To observe the waveforms at different stages of an AM low power transmitter
	5	Block diagram and working principles of Armstrong FM transmitters		
	6	Assignment		
3rd	7	Principle and working with block diagram of super heterodyne AM receiver,	3	Revision
	8	Function of each block and typical waveforms at input and output of each block		
	9	Performance characteristics of a radio receiver: sensitivity,		
4th	10	selectivity,	4	To observe the waveforms at different stages of a Radio Receiver
	11	fidelity, S/N ratio		
	12	Class test		
5th	13	Image rejection ratio and their measurement procedure	5	Revision
	14	Concepts of simple and delayed AGC		
	15	Block diagram of an FM receiver, function of each block		
6th	16	Assignment	6	To align AM broadcast radio receiver
	17	Electromagnetic spectrum and its various ranges: VLF, LF, MF, HF, VHF, UHF, Microwave		
	18	Physical concept of radiation of electromagnetic energy from a dipole.		
7th	19	Concept of polarization of EM Waves	7	Revision
	20	Definition and physical concepts of the terms used with antennas like point source		
	21	Gain directivity, aperture, effective area, radiation pattern		
8th	22	Beam width and radiation resistance, loss resistance.	8	To identify and study the various types of antennas used in different frequency ranges.
	23	Types of antennas-brief description, characteristics and typical applications of half wave dipole		
	24	folded dipole,		
9th	25	Patch, loop Antenna	09	Revision
	26	Ferrite rod, Yagi antenna		
	27	dish antenna		
10th	28	Assignment	10	To plot the radiation pattern of a directional
	29	Basic idea about different modes of wave propagation and		

		typical areas of application		and omni directional antenna
	30	Ground wave propagation and its characteristics		
11th	31	Space wave communication – line of sight propagation, standard atmosphere	11	Revision
	32	Structure of standard atmosphere		
	33	sky wave propagation		
12th	34	Ionosphere and its layers.	12	To plot the variation of field strength of a radiated wave, with distance from a transmitting antenna
	35	Explanation of terms - virtual height, critical frequency, skip distance,		
	36	Maximum usable frequency, multiple hop propagation.		
13th	37	Assignment	13	Revision
	38	Class Test		
	39	Basic idea about satellite communication		
14th	40	Passive and active satellites	14	To study and rectify different faults in a broadcast radio receiver
	41	Meaning of the terms; orbit, apogee, perigee		
	42	Geo-stationary satellite and its need		
15th	43	Block diagram and explanation of a satellite communication link.	15	Revision
	44	Introduction to VSAT		
	45	VSAT and its features		
16th	46	Assignment	16	Revision
	47	Class test		
	48	Revision		