

# LESSON PLAN

Period	Date	Topic	Unit No.	Teaching Methodology	Remarks	Correction Action Upon Review
1	23/12	INTRODUCTION to Satellite comm.	1	BO		
2	24/12	Origin of satellite comm. Historical background	"	"		
3	25/12	Basic concepts of satellite communication	"	PPTs		
4	27/12	Frequency allocations for satellite services	"	R		
5	30/12	Applications of satellites	"	Black board		
6	31/12	Future trends of satellite comm.	"	"		
7	2/1	Orbital mechanics	2	"		
8	3/1	Look ahead angle determination	"	"		
9	6/1	Orbital perturbation 1	"	Black board		
10	7/1	Orbital determination launch vehicles	"	R		
11	8/1	Orbital effects in comm system <small>propagation</small>	"	PPTs "		
12	9/1	Historical	"	"		
13	10/1	Altitude and orbit control system	3	"		
14	19/1	Telemetry	"	"		
15	20/1	Tracking	"	"		
16	21/1	Command and monitoring	"	"		

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17	22/1	power systems	1	D/S		
18	23/1	Communication sub systems	1	Black		
19	24/1	Satellite antenna equipment Reliability	"	Good R		
20	29/1	Space qualification	"	PPT		
21	28/1	Tutorial class	"	"		
22	29/1	Satellite link design, base transmission	4	"		
23	30/1	Continued	"	"		
24	21/1	system noise temperature and G/T ratio	"	"		
25	1/2	Continued	"	"		
26	3/2	Design of down links, uplink design	"	"		
27	4/2	Design of satellite links for specified Q <sub>v</sub>	"	"		
28	5/2	System design example	"	"		
29	6/2	Continued	"	"		
30	7/2	Tutorial	"	"		
31	14/2	FDMA, Intermodulation	5	"		
32	18/2	Calculation of C/N	"	"		
33	19/2	TDMA, Frame structure	"	"		

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Serial	Date	Topic	Unit No	Teaching Methodology	Remarks	Corrective Action Upon Review
37	20/2	example satellite network TDMA protocol	11	11		
38	21/2	processing	11	PPT &		
39	22/2	DMA, CDMA	11	11		
32	23/2	spread spectrum transmission & reception	11	11		
38	26/2	Introduction Transmitters	6	11		
39	27/2	Rxs, antennas	11	Black Board		
40	28/2	Tracking systems	11	&		
41	3/3	Terrestrial interface	11	PPTs		
42	4/3	Primary power test methods	11	11		
43	5/3	Orbit consideration coverage & frequency	7	11		
44	6/3	consideration Delay & throughput	11	11		
45	7/3	System considerations	11	11		
46	10/3	Operational NGS	11	11		
47	11/3	Constellation Designs	11	11		
48	12/3	Tutorial	11	11		

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Period	Date	Topic	Unit No.	Teaching Methodology	Remarks	Corrective Act Upon Review
49	13/3	Radio and satellite navigation	8	"		
50	17/3	GPS position location principles	"	"		
51	18/3	GPS Receivers and codes	"	Black		
52	19/3	satellite signal acquisition	"	Black & PPT-S.		
53	21/3	GPS navigation message	"	"		
54	25/3	GPS signal levels	"	"		
55	26/3	GPS receiver operation. GPS CIA code accuracy	"	"		
56	27/3	Differential GPS.	"	"		
57	3/4	Tutorial.	"	"		
58	4/4	Previous question papers	"	"		