

LESSON PLAN

Period	Date(tentative)	Topic	Unit no	Teaching methodology
1	2-2-15	Review of coordinate systems		Class room teaching
2	3-2-15			
3	4-2-15	Vector calculus		
ELECTROSTATICS				
4	6-2-15	Coulombs' law	I	Class room teaching
5	9-2-15	Different charge distributions(ρ_l , ρ_s , ρ_v)		
6	10-2-15	Electric field intensity due to ρ_l		
7	11-2-15	Electric field intensity due to ρ_s		
8	13-2-15	Electric field intensity due to ρ_v		
9	16-2-15	Electric flux density		
10	17-2-15	Gauss law		
11	18-2-15	Electric potential		
		Relation between E & V		
12	20-2-15	Maxwell two equations for E-fields		
13	23-2-15	Energy density		
14	24-2-15	Convection and conduction currents		
15	25-2-15	Dielectric constant		
16	27-2-15	Isotropic, homogeneous dielectrics		
		Continuity equation, relaxation time		
17	16-3-15	Poisson's & Laplace equations		
18	17-3-15	Capacitance –parallel plate,coaxial,spherical		
19	18-3-15			
20	21-3-15	Problems, assignment-I		
MAGNETO STATICS				
21	23-3-15	Biot-savart law	II	Class room teaching
22	24-3-15	Ampere's circuital law & applications		
23	25-3-15	Magnetic flux density		
24	27-3-15	Maxwell two equations for H-fields		
25	30-3-15	Magnetic scalar& vector potentials		
26	31-3-15	Forces due to magnetic fields , Ampere's force law		
27	1-4-15	Inductances & magnetic energy		
MAXWELL'S EQUATIONS				
28	3-4-15	Faraday's law & transformer emf	III	Class room teaching
29	6-4-15	Inconsistency of ampere's law, displacement current density		
30	7-4-15	Maxwell equations-diff forms &word statements		
31	8-4-15	Boundary conditions dielectric-dielectric		
32	10-4-15			
33	13-4-15	Boundary conditions dielectric-conductor		
34	14-4-15			
35	15-4-15	Problems		

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EM WAVE CHARACTERISTICS				
36	17-4-15	Wave equations for conducting and perfect dielectric	IV	Class room teaching
37	20-4-15			
38	21-4-15	Uniform plane waves		
39	22-4-15	Definition		
40	24-4-15	All relations b/w E and H		
41	27-4-15			
42	28-4-15	Sinusoidal variations		
43	29-4-15	Wave propagation in conducting media		
44	1-5-15	Wave propagation in lossless media		
45	18-5-15	Conductors and dielectrics characterisation		
46	19-5-15	Wave propagation in good conductors		
47	20-5-15	Wave propagation in good dielectrics		
48	22-5-15	Polarization		
49	25-5-15	Problems		
50	26-5-15	Reflection and refraction of plane waves		
51	27-5-15	NORMAL incidence		
52	29-5-15	Reflection and refraction of plane waves		
53	1-6-15	OBLIQUE incidence		
54	2-6-15	Brewster angle, critical angle		
55	3-6-15	Total internal reflection, surface impedance		
56	5-6-15	Poynting vector ,poynting theorem		
57	8-6-15	Power loss,problems		
TRANSMISSION LINES				
58	9-6-15	Types,parameters,equations	V	Class room teaching
59	10-6-15	primary , secondary constants		
60	12-6-15	Zo , Vp ,Vg ,propagation consts		
61	15-6-15	Infinite,lossless,lowloss lines		
62	16-6-15	Distortion,loading		
63	17-6-15	problems		
64	19-6-15	Zi , SC&OC Lines ,reflection coefficient		
65	22-6-15	VSWR,UHF lines		
66	23-6-15	$\lambda/4$, $\lambda/2$, $\lambda/8$ lines –impedance transformations		
67	24-6-15	Smith chart-single & double stub matching		
68	26-6-15	problems		