

Aditya Institute of Technology and Management (Autonomous), Tekkali
II Year B.Tech (Electronics and Communication Engineering) I- Sem.
II ECE-B 2014-15 SEM-I
PROBABILITY THEORY AND STOCHASTIC PROCESSES
LESSON PLAN

Periods	Date (Tentative)	Topic	Unit No	Teaching Methodology	Remarks	Corrective Action Upon Review
1	01/09/14	Need of probability, Concepts in engineering applications. Set theory introduction.	Unit -I	Black Board		
2	02/09/14	Probability definition based on set theory and in terms of relative frequency,		Black Board		
3	04/09/14	Probability definitions and fundamental axioms.		Black Board		
4	05/09/14	Problems and solutions.		Black Board		
5	08/09/14	Joint probability & Conditional probability, Sample space definition. Discrete, Continuous and combined samples spaces with examples		Black Board		
6	09-09-14	Total probability theorem. Introduction to Joint and independent events		Black Board		
7	11-09-14	Baye's theorem derivation, Problems on Baye's theorem.		Black Board		
8	12-09-14	Problems & Solutions		Black Board		
9	15-09-14	Problems & Solutions		Black Board		
10	16/09/14	Problems & Solutions/ Quiz		Black Board		
11	18/09/14	Definition of random variable, Classification and properties of random variables , Conditions for function to be random variable	Unit II	Black Board		
12	19/09/14	Introduction to density function and its properties.		Black Board		
13	22/09/14	Introduction to distribution function and its properties.		Black Board		

14	23/09/14	Distribution and density functions of Gaussian and uniform random variables.		Black Board			
15	25/09/14	Binomial & Poisson's density and distribution functions		Black Board			
16	26/09/14	Exponential, Rayleigh random variable density and distribution functions.		Black Board			
17	29/09/14	Problems and solutions		Black Board			
18	30-09-14	Conditional density , distributions functions and its properties		Black Board			
19	03-10-14	Monotonic transformations of continuous random variable.		Black Board			
20	06-10-14	Non – monotonic transformations of continuous random variable.		Black Board			
21	07-10-14	Problems and solutions		Black Board			
22	27-10-14	Properties of joint density function	Unit III	Black Board			
23	28-10-14	Properties of Marginal distribution function.		Black Board			
24	30-10-14	Conditional density and distribution functions		Black Board			
25	31-10-14	Concept of statistical independence. Sum of two random variables		Black Board			
26	03-11-14	Sum of several random variables.					
27	04-11-14	Central limit theorem for equal and unequal distributions.		Black Board			
28	06-11-14	Finding expected value of a random variable, problems.		Black Board			
29	07-11-14	Problems and solutions		Black Board			
30	10-11-14	Joint moments about the origin		Black Board			
31	11-11-14	Joint central moments		Black Board			
32	13-11-14	Characteristic function & its properties		Black Board			

33	14-11-14	Problems and solutions		Black Board			
34	17-11-14	Joint Gaussian random variable introduction	Unit IV				
35	18-11-14	Transformations on multiple random variable		Black Board			
36	20-11-14	Linear transformations		Black Board			
37	21-11-14	Random process concept and classification of processes.		Black Board			
38	24-11-14	Concept of stationarity and statistical independence		Black Board			
39	025-11-14	First – order, second – order, wide – sense and strict – sense stationarity process.		Black Board			
40	27-11-14	Concept of Time average and Ergodicity and mean – Ergodic Processes		Black Board			
41	28-11-14	Autocorrelation and its properties,		Black Board			
42	01-12-14	Cross correlation function and its properties		Black Board			
43	02-12-14	Covariance functions and its properties		Black Board			
44	03-12-14	Poisson random process		Black Board			
45	08-12-14	Random process spectral characteristics. The power density spectrum and its properties	Unit-V	Black Board			
46	09-12-14	Relationship between power spectrum and auto correlation function		Black Board			
47	11-12-14	The cross power density spectrum and its properties		Black Board			
48	12-12-14	Relationship between cross power spectrum and cross correlation function.		Black Board			
49	15-12-14	Linear system and its properties		Black Board			
50	16-12-14	Filter definition and types of filters		Black Board			
51	18-12-14	Concept of modeling of noise sources- Resistive (thermal) arbitrary noise sources.		Black Board			
52	19-12-14	Arbitrary noise sources with examples		Black Board			

53	21-12-14	Concept of effective noise temperature, average noise figure		Black Board			
54	23-12-14	Concept of average noise figure of cascaded networks.		Black Board			
55	26-12-14	Problems and solutions		Black Board			
56	29-12-14	Problems and solutions		Black Board			
57	30-12-14	Problems and solutions / GATE Questions		Black Board			
58	02-01-15	Problems and solutions/ GATE Questions		Black Board			
59	05-01-15	Problems and solutions / GATE Questions		Black Board			
60	06-01-15	Problems and solutions/ GATE Questions		Black Board			

Signature of the faculty

Signature of HOD/ECE