Aditya Institute of Technology and Management (Autonomous), Tekkali
II Year B.Tech (Electronics and Communication Engineering) I- Sem.
II ECE-C 2015-16 SEM-I
PROBABILITY THEORY AND STOCHASTIC PROCESSES
LESSON PLAN

Periods	Date (Tentative)	Topic	Unit No	Teaching Methodology	Remarks	Corrective Action Upon Review
1	04-01-2016	Overview of the subject and its Applications in engineering. Set definitions.	Unit -I	Black Board		
2	05-01-2016	Probability introduced through sets and relative frequency, Axioms		Black Board		
3	05-01-2016	Introduction to Joint and Conditional probability and independent events, Problems and solutions.		Black Board		
4	08-01-2016	Sample space definition. Discrete, Continuous and combined samples spaces with examples.		Black Board		
5	11-01-2016	Total probability theorem, Baye's theorem introduction.		Black Board		
6	12-01-2016	Baye's theorem derivation and problems..		Black Board		
7	12-01-2016	Problems and solutions		Black Board		
8	18-01-2016	Problems and solutions		Black Board		
9	19-01-2016	Problems and solutions		Black Board		
10	19-01-2016	Definition of random variable, Classification and properties of random variables , Conditions for function to be random variable	Unit - II	Black Board		
11	22-01-2016	Introduction to density and distribution function and its properties.		Black Board		
12	25-01-2016	Distribution and density functions of Gaussian and uniform random variables.		Black Board		
13	29-01-2016	Exponential, Rayleigh random variable density and distribution functions.		Black Board		

14	01-02-2016	Operations on one random variable, moments about the origin and moments about the mean.		Black Board			
15	02-02-2016	Chebychev's and Markov's inequality-explanation		Black Board			
16	02-02-2016	Monotonic and non – monotonic transformations of continuous random variable.		Black Board			
17	05-02-2016	Problems and solutions		Black Board			
18	08-02-2016	Problems and solutions		Black Board			
19	09-02-2016	Vector random variables, joint distribution function introduction, properties of joint distribution function.	Unit - III	Black Board			
20	16-02-2016	Concept of Marginal distribution functions, conditional distribution function.		Black Board			
21	16-02-2016	Concept of statistical independence, sum of two random variables, sum of several random variables.		Black Board			
22	19-02-2016	Central limit theorem for equal and unequal distributions.		Black Board			
23	22-02-2016	Expected value of a function of joint random variables, joint moments about the origin		Black Board			
24		Joint central moments, joint characteristic function explanation.		Black Board			
25	23-02-2016	Problems and solutions		Black Board			
26	23-02-2016	Problems and solutions		Black Board			
27	26-02-2016	Problems and solutions		Black Board			
28	29-02-2016	Joint Gaussian random variable introduction, Two random variables case, N random variable case,	Unit-IV	Black Board			
29	01-03-2016	Properties, transformations of multiple random		Black Board			

		variables					
30	01-03-2016	Concept of random process, stationarity and statistical independence.		Black Board			
31	04-03-2016	First – order, second – order, wide – sense and strict – sense stationarity process.		Black Board			
32	07-03-2016	Concept of Time average and Ergodicity and mean – Ergodic Processes		Black Board			
33	08-03-2016	Autocorrelation and its properties, Covariance Functions.		Black Board			
34	08-03-2016	Gaussian Random Processes		Black Board			
35	11-03-2016	Poisson Random Process.		Black Board			
36	14-03-2016	Problems and solutions		Black Board			
37	15-03-2016	Problems and solutions		Black Board			
38	15-03-2016	Concept of convolution- Random signal response of linear Systems	Unit-V	Black Board			
39	21-03-2016	Concept of mean & mean squared value of a system response.		Black Board			
40	22-03-2016	Auto correlation & Cross correlation functions of input & output.		Black Board			
41	22-03-2016	Spectral characteristics of system response (power density),		Black Board			
42	28-03-2016	Power density spectrum of response , Cross power density spectrum of input and output.		Black Board			
43	29-03-2016	Concept of Band pass, band-limited and narrowband processes.		Black Board			
44	29-03-2016	Problems and solutions		Black Board			
45	04-04-2016	Problems and solutions		Black Board			
46	05-04-2016	Concept of modeling of noise sources- Resistive (thermal) arbitrary noise sources,		Black Board			
47	08-04-2016	Concept of effective noise temperature,		Black Board			

		average noise figure					
48	11-04-2016	Concept of average noise figure of cascaded networks.		Black Board			
49	12-04-2016	Problems and solutions		Black Board			
50	12-04-2016	Problems and solutions		Black Board			
51	18-04-2016	GATE Questions & Answers		Black Board			
52	19-04-2016	GATE Questions & Answers		Black Board			
53	22-04-2016	GATE Questions & Answers		Black Board			

Signature of the faculty

Signature of HOD/ECE