

# Bhoj Reddy Engineering College for Women: Hyderabad

## Faculty of Mathematics

### Lesson plan of faculty member for the academic year 2017–18

Class: I B Tech

Branch-Section: IT-B

Semester: II

Subject: Mathematics –III

Lectures per week: 4+1 (Tutorial)

Lecture Number	Topics to be covered	Date (s)
<b>UNIT – I: Random Variables and Distributions</b>		
1	Introduction	18 December 2017
2	Random Variables-Discrete and Continuous	20 December 2017
3	Random Variables-Discrete and Continuous	22 December 2017
4	<b>Tutorial:</b> Problems on Random Variables	22 December 2017
5	Mass function, Cumulative Distribution function of a discrete random variable	23 December 2017
6	Problems on Mass function, Cumulative Distribution function	27 December 2017
7	Problems on Cumulative Distribution function	29 December 2017
8	<b>Tutorial:</b> Mathematical expectation(mean), Variance, S.D (Discrete) & Problems	29 December 2017
9	Problems on Mean, Variance, S.D	30 December 2017
10	Mathematical expectation(mean), Variance, S.D (Continuous)	3 January 2018
11	Mathematical expectation(mean), Variance, S.D (Continuous)	5 January 2018
12	<b>Tutorial:</b> Problems on Mean & Variance	5 January 2018
13	Moment generating function	6 January 2018
14	Moments and Properties	8 January 2018
15	Discrete Distributions: Binomial Distribution, Mean and Variance of B.D.	10 January 2018
16	Geometric Distribution, Mean and Variance of G.D.	12 January 2018
17	Problems on Mean & Variance of Geometric Distribution	12 January 2018
18	Continuous Distributions: Normal Distribution	13 January 2018
19	Mean and Variance of N.D	17 January 2018
20	Problems on Normal Distribution	19 January 2018
21	<b>Tutorial :</b> Moment generating functions of B.D, G.D and N.D.	19 January 2018
22	Tutorial(G1, G2, G3): Problems on Moment generating function	20 January 2018
23	Problems on Moment generating function	22 January 2018
<b>UNIT-II: Sampling Theory</b>		
24	Introduction Sampling distribution of means( $\sigma$ known)	24 January 2018
25	Population and Samples, Problems on Population and Samples	27 January 2018
26	t-distribution	29 January 2018
27	t-distribution	31 January 2018
28	Sampling distribution of means ( $\sigma$ unknown)	2 February 2018
29	<b>Tutorial:</b> Sampling distribution of variances- $\chi^2$ Distribution, Problems on Sampling distribution of means	2 February 2018
30	Maximum error of estimate, Sampling distribution of variances-F Distribution	3 February 2018
<b>UNIT-III: Tests of Hypothesis</b>		
31	Introduction to Null Hypothesis , Alternative Hypothesis	5 February 2018
32	Type I error, Type II error	7 February 2018
33	Level of Significance, Critical region, Accepted region , One Tail and two Tail tests and problems	9 February 2018
34	<b>Tutorial:</b> Test concerning one mean	9 February 2018

35	Problems on Test concerning one mean	10 February 2018
36	Test concerning one Proportion	12 February 2018
37	Problems on Test concerning one Proportion	14 February 2018
38	Test concerning two means and their differences	16 February 2018
39	<b>Tutorial:</b> Problems on Test concerning two means and their differences	16 February 2018
40	Problems on Test concerning two means & two proportions	17 February 2018
41	Test concerning two proportions and their differences	19 February 2018
42	Problems on Test concerning two proportions and their differences	21 February 2018
43	ANOVA for one-way classified data	23 February 2018
44	<b>Tutorial</b> : Problems	23 February 2018
	<b>UNIT-IV: Algebraic and Transcendental Equations</b>	
45	Solution of Algebraic And Transcendental Equations	24 February 2018
46	Graphical interpretation of solution of equations	26 February 2018
47	The Bisection Method	28 February 2018
48	Problems	2 March 2018
49	<b>Tutorial:</b> The Method of False Position	2 March 2018
50	Problems on Bisection Method	3 March 2018
51	The Iteration Method	5 March 2018
52	Fixed point Iteration	7 March 2018
53	Newton Raphson Method and problems	9 March 2018
54	<b>Tutorial:</b> Newton Raphson Method	9 March 2018
55	Solving Linear system of equations by Guass Jacobi	10 March 2018
56	Guass Jacobi's Method	12 March 2018
57	Guass seidal Iteration method	14 March 2018
58	Problems on Guass seidal Iteration method	16 March 2018
59	<b>Tutorial:</b> Curve Fitting: Fitting a Linear Curve by method of Least Squares	16 March 2018
60	Fitting a Second Curve by method of Least Squares	17 March 2018
61	Fitting a Exponential Curve by method of Least Squares	19 March 2018
62	Fitting a Power Curve by method of Least Squares	21 March 2018
63	Problems on Method of Least Squares	23 March 2018
64	<b>Tutorial:</b> Problems on Method of Least Squares	23 March 2018
	<b>UNIT –V :Numerical Integration and solution of Ordinary Differential equations</b>	
65	Numerical Integration – Trapezoidal rule Simpson's rule	24 March 2018
66	Problems on Trapezoidal rule , Simpson's $1/3^{\text{rd}}$ and $3/8^{\text{th}}$ rule	28 March 2018
67	Solution of Ordinary Differential Equations by Taylor's Series	31 March 2018
68	Euler's Method, Runge-Kutta Method second & Fourth order	2 April 2018

#### Text Books:

1. "Probability and Statistics for Engineers" by Richard Arnold Johnson & Irwin Miller,
2. "Probability and Statistics", by TKV Iyengar and B.Krishna Gandhi Et, 2009
3. "Numerical Methods for Scientific and Engineering Computation", by M.KJain & S.R.K.Iyengar, International Publishers.

Name and signature of the faculty: Sangeetha G ----

Name and signature of Head –Mathematics Faculty : Padma K ----

Bhoj Reddy Engineering College for Women: Hyderabad  
Department of on Basic Sciences  
Lesson plan of faculty member for the academic year 2016–17

Class: I B Tech  
Subject: Mathematics –III

Branch-Section: CSE-B

Semester: II  
Lectures per week: 4+1 (Tutorial)

Lecture Number	Topics to be covered	Date (s)
<b>UNIT – I: Random Variables and Distributions</b>		
1	Introduction	03 January 2018
2	Random Variables-Discrete and Continuous	04 January 2018
3	Random Variables-Discrete and Continuous	05 January 2018
4	Mass function, Cumulative Distribution function of a discrete random variable	06 January 2018
5	Tutorial(G1,G2,G3): Problems on Random Variables	07 January 2018
6	Problems on Mass function, Cumulative Distribution function	10 January 2018
7	Problems on Cumulative Distribution function	11 January 2018

8	Mathematical expectation(mean), Variance,S.D (Discrete) & Problems	12 January 2018
9	Problems on Mean, Variance,S.D	17 January 2018
10	Mathematical expectation(mean),Variance,S.D(Continuous)	18 January 2018
11	Mathematical expectation(mean),Variance,S.D(Continuous)	19 January 2018
12	Moment generating function	20 January 2018
13	Tutorial(G1,G2,G3): Problems on Moment generating function	21 January 2018
14	Moments and Properties	24 January 2018
15	Discrete Distributions: Binomial Distribution, Mean and Variance of B.D.	25 January 2018
16	Geometric Distribution, Mean and Variance of G.D.	27 January 2018
17	Tutorial(G1,G2,G3): Problems on Mean & Variance of Geometric Distribution	28 January 2018
18	Continuous Distributions: Normal Distribution	31 January 2018
19	Mean and Variance of N.D	01 February 2018
20	Problems on Normal Distribution	02 February 2018
21	Moment generating functions of B.D, G.D and N.D.	03 February 2018
22	Tutorial(G1,G2,G3): Problems on Moment generating function	04 February 2018
23	Problems on Moment generating function	07 February 2018
<b>UNIT-II: Sampling Theory</b>		
24	Introduction	08 February 2018
25	Sampling distribution of means( $\sigma$ known)	09 February 2018
26	Population and Samples	10 February 2018
27	Tutorial(G1,G2,G3): Problems on Population and Samples	11 February 2018
28	t-distribution	14 February 2018
29	Sampling distribution of means ( $\sigma$ unknown)	15 February 2018
30	Sampling distribution of means ( $\sigma$ unknown)	16 February 2018
31	Sampling distribution of variances- $\chi^2$ Distribution	17 February 2018
32	Tutorial(G1,G2,G3):Problems on Sampling distribution of means	18 February 2018
33	Sampling distribution of variances-F Distribution	21 February 2018
34	Maximum error of estimate	22 February 2018
<b>UNIT-III: Tests of Hypothesis</b>		
35	Introduction to Null, Alternative Hypothesis, Type I error, Type II error	23 February 2018
36	Tutorial(G1,G2,G3): Problems on Type I error, Type II error	25 February 2018
37	Level of Significance, Critical region, Accepted region	28 February 2018
38	One Tail and two Tail tests	01 March 2018
39	Problems on One Tail and two Tail tests	02 March 2018
40	Objective & Question Bank	03 March 2018
41	Revision	04 March 2018
42	Test concerning one mean	09 March 2018
43	Problems on Test concerning one mean	10 March 2018
44	Tutorial(G1,G2,G3):Test concerning one Proportion	11 March 2018
45	Problems on Test concerning one Proportion	14 March 2018
46	Test concerning two means and their differences	15 March 2018
47	Problems on Test concerning two means and their differences	16 March 2018
48	Test concerning two proportions and their differences	17 March 2018
49	Tutorial(G1,G2,G3): Problems on Test concerning two means & two proportions	18 March 2018
50	Problems on Test concerning two proportions and their differences	21 March 2018
51	ANOVA for one-way classified data	22 March 2018

52	Problems	23 March 2018
<b>UNIT-IV: Algebraic and Transcendental Equations</b>		
53	Solution of Algebraic And Transcendental Equations,	24 March 2018
54	Tutorial(G1,G2,G3): Problems	25 March 2018
55	Graphical interpretation of solution of equations	28 March 2018
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57	The Method of False Position	31 March 2018
58	Tutorial(G1,G2,G3): Problems on Bisection Method	01 April 2018
59	The Iteration Method	04 April 2018
60	Fixed point Iteration	06 April 2018
61	Newton Raphson Method	07 April 2018
62	Tutorial(G1,G2,G3): Problems on Newton Raphson Method	08 April 2018
63	Solving Linear system of equations by Guass Jacobi's Method	11 April 2018
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66	Tutorial(G1,G2,G3): Problems on Guass seidal Iteration method	15 April 2018
67	Curve Fitting: Fitting a Linear Curve by method of Least Squares	18 April 2018
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69	Fitting a Exponential Curve by method of Least Squares	20 April 2018
70	Fitting a Power Curve by method of Least Squares	21 April 2018
71	Tutorial(G1,G2,G3): Problems on Method of Least Squares	22 April 2018
<b>UNIT –V :Numerical Integration and solution of Ordinary Differential equations</b>		
72	Numerical Integration – Trapezoidal rule Simpson's rule	25 April 2018
73	Problems on Trapezoidal rule	26 April 2018
74	Problems on Simpson's $1/3^{\text{rd}}$ and $3/8^{\text{th}}$ rule	27 April 2018
75	Solution of Ordinary Differential Equations by Taylor's Series	28 April 2018
76	Tutorial(G1,G2,G3): Problems on Taylor's Series	29 April 2018
77	Solution of Ordinary Differential Equations by Taylor's Series	02 May 2018
78	Picards method of Successive Approximation	03 May 2018
79	Picards method of Successive Approximation	04 May 2018
80	Euler's Method, Runge-Kutta Method second & Fourth order	05 May 2018
81	Tutorial(G1,G2,G3): Problems on Runge-Kutta Method	06 May 2018
82	Revision	09 May 2018

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- 3."Numerical Methods for Scientific and Engineering Computation", by M.KJain & S.R.K.Iyengar, International Publishers.

Name and signature of the faculty: Sangeetha G ----

Name and signature of Head of the Department: Padma K ----