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-II   Lectures per week: 4+1Tutorial

Lecture Number	Topics to be covered	Date (s)
UNIT-I: Laplace Transforms	
1	Definition of integral transform, Laplace Transform, Existence of Laplace Transform	18 December 2017
2	Laplace Transforms of Standard functions	19 December 2017
3	Change of Scale Property & First Shifting Property and problems	20 December 2017
4	Second shifting theorem, $L[t^n f(t)]$, $L[t^{-1}f(t)]$, Laplace Transform of Integral of f(t) and problems	22 December 2017
5	**Tutorial**: Problems on Laplace Transform of Standard functions	23 December 2017
6	Laplace Transform of derivative of f(t) and Problems, Evaluation of Integrals by Laplace Transform	27 December 2017
7	Laplace Transform of Dirac's delta function & Unit step function and problems	29 December 2017
8	**Tutorial**: Problems on Laplace Transforms	30 December 2017
9	Laplace transform of Periodic functions and problems	02 January 2018
10	Inverse Laplace transforms of standard functions and Properties.	03 January 2018
11	Problems of Inverse Laplace transforms using partial fractions and Properties	05 January 2018
12	**Tutorial**: Problems of Inverse Laplace transforms	06 January 2018
13	Convolution theorem and its problems	08 January 2018
14	Solving ordinary differential equations by Laplace Transforms	09 January 2018
UNIT-II: Beta and Gamma Functions	
15	Gamma function and its other forms	10 January 2018
16	Properties of Gamma Function	12 January 2018
17	**Tutorial**: Problems of Gamma function	13 January 2018
18	Beta function and Properties of Beta function	16 January 2018
19	Other forms of Beta function	17 January 2018
20	Relation between Gamma and Beta function	19 January 2018
21	**Tutorial**: Problems of Gamma and Beta functions	20 January 2018
22	Problems on Gamma and Beta function	22 January 2018
23	Evaluation of integrals by Gamma and Beta Function	23 January 2018

	UNIT-III: Multiple Integrals	
24	Double integrals, Evaluation of Double integrals	24 January 2018
25	**Tutorial:** Problems on Double Integrals	27 January 2018
26	Problems on Double Integrals	29 January 2018
27	Change of order of integration and its problems	30 January 2018
28	Change of variables (polar) and its problems	31 January 2018
29	Change of variables and its problems	02 February 2018
30	**Tutorial:**Problems Change of variables	03 February 2018
31	Finding area of a region using double integration and its problems	05 February 2018
32	Evaluation of Triple integrals and problems	06 February 2018
33	**Tutorial**: Problems on Multiple Integrals	10 February 2018
34	Evaluation of Triple integrals when the volume given	12 February 2018
35	Change of variables into polar form (cylindrical & spherical) and its problems	14 February 2018
36	Finding Center of Gravity using Gamma and Beta function	16 February 2018
37	**Tutorial**: Finding volumes using triple integration and its problems	17 February 2018
	UNIT-IV: Vector Differentiation	
38	Vector Differential Operator,Scalar point function,Vector point function	19 February 2018
39	Gradient of a Scalar point function and problems	20 February 2018
40	Divergence of a Vector point function and problems	21 February 2018
41	Curl of a Vector point function and problems	23 February 2018
42	**Tutorial**: Problems on Gradient,Divergence and Curl	24 February 2018
43	Laplacian operator and problems	26 February 2018
44	Vector Identities(repeated application of del)	27 February 2018
45	Vector Identities(product of two point functions)	28 February 2018
46	Scalar Potential Function and problems	02 March 2018
47	**Tutorial:**Problems on Vector Identities	03 March 2018
48	Problems on Vector Identities	05 March 2018
	UNIT-V: Vector Integration	
49	Line integral, Problems on Line integral	06 March 2018
50	Scalar Potential Function by Line Integral	07 March 2018
51	Surface Integral, Problems on Surface Integral	09 March 2018
52	Problems on Surface Integral when surface given	12 March 2018
53	Volume Integral, Problems on Volume Integral	13 March 2018
54	Problems on Volume Integral when volume given	14 March 2018
55	Examples	16 March 2018
56	**Tutorial**: Problems on Line integral, Work done by Line integral	17 March 2018
57	Green's theorem and problems	19 March 2018
58	problems on Green's theorem	20 March 2018

59	Guass Divergence theorem and problems	21 March 2018
60	problems on Gauss Divergence theorem	23 March 2018
61	**Tutorial**:Problems on Gauss Divergence theorem	24 March 2018
62	Stokes theorem and problems	27 March 2018
63	Objective Question Bank	28 March 2018
64	**Tutorial**: problems on Stokes theorem	31 March 2018
65	Revision	02 April 2018
66	Revision	03 April 2018

Text Books :1. Higher Engineering Mathematics

by Dr.B.S.Grewal by Khanna Publishers

2. Advanced Engineering Mathematics by R.K.Jain & S.R.K.Iyengar,Narosa Publishers

Name and signature of the faculty: Padma K

Name and signature of Head of Mathematics Faculty:Padma K