

Bhoj Reddy Engineering College for Women: Hyderabad  
Department of Mathematics  
Lesson plan of faculty member for the academic year 2018–19

Class: II B Tech  
Subject: Mathematics - IV

Branch: EEE

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

Lecture Number	Topics to be covered	Date (s)
<b>UNIT – I: Functions of a Complex variable</b>		
1	Introduction to complex functions	09 July 2018
2	Problems on Concepts of Limit, Continuity, Differentiability	10 July 2018
3	Analyticity, Cauchy – Riemann equations in Cartesian coordinates	11 July 2018
4	CR equations in polar coordinates	12 July 2018
5	<b>Tutorial:</b> Problems on C-R equations	13 July 2018
6	Problems on Harmonic and Conjugate Harmonic Functions	16 July 2018
7	Milne Thompson Method	17 July 2018
8	Problems on Milne Thompson Method	18 July 2018
9	Problems on Milne Thompson Method	19 July 2018
10	<b>Tutorial:</b> Problems on C-R Equations	20 July 2018
11	Revision	23 July 2018
<b>UNIT-II: Complex Integration</b>		
12	Problems on Line Integral - evaluation along a path	24 July 2018
13	Line Integral Evaluation by Indefinite Integration	25 July 2018
14	Cauchy's Integral Theorem	26 July 2018
15	<b>Tutorial:</b> Cauchy's Integral Theorem & problems	27 July 2018
16	Problems on Cauchy's Integral Formula	30 July 2018
17	Problems on Generalized Integral Formula	31 July 2018
18	Generalized Integral Formula	01 August 2018
19	Power Series: Taylor's series	02 August 2018
20	<b>Tutorial:</b> Problems on Taylor's series	03 August 2018
21	Laurent series	07 August 2018
22	Problems on Laurent series	08 August 2018
23	Singular Point, Isolated Singular Point	09 August 2018
24	<b>Tutorial:</b> Problems on Pole, Pole of Order m	10 August 2018
25	Essential Singularity	13 August 2018
26	Problems on Residues	14 August 2018
27	Evaluation of Residue by Formula	16 August 2018
28	<b>Tutorial:</b> Cauchy Residue Theorem	17 August 2018
29	Problems on Residue Theorem	20 August 2018
30	Revision	21 August 2018
<b>UNIT-III: Evaluation of Integrals</b>		
31	Problems on Evaluation of Integral of the type $\int f(x)dx$	23 August 2018
32	<b>Tutorial:</b> Evaluation of Integral of the type $\int f(x)dx$	24 August 2018
33	Evaluation of Integral of the type $\int f(x)dx$	27 August 2018
34	Evaluation of Integral of the type $\int f(\cos\theta, \sin\theta)d\theta$	28 August 2018
35	Problems on Evaluation of Integral of the type $\int f(\cos\theta, \sin\theta)d\theta$	29 August 2018
36	Revision	30 August 2018
37	<b>Tutorial:</b> Evaluation of Integral by type $\int f(\cos\theta, \sin\theta)d\theta$	31 August 2018
38	<b>Tutorial:</b> Bilinear Transformation	07 September 2018
39	Fixed Point of bilinear transformation	10 September 2018
40	Cross ratio property of bilinear transformation and problems	11 September 2018
41	Problems on Properties of bilinear transformation	12 September 2018
42	<b>Tutorial:</b> Invariance of Circles	14 September 2018
<b>UNIT-IV: Fourier series and Fourier transforms</b>		
43	Introduction of Fourier Series and Periodic functions	17 September 2018
44	Problems on Fourier series even and odd functions	18 September 2018

45	Problems on Fourier Series of periodic functions	19 September 2018
46	Fourier series of even and odd functions	20 September 2018
47	Problems on Fourier series even and odd functions	24 September 2018
48	Even & Odd periodic functions	25 September 2018
49	Problems on Even & Odd periodic functions	26 September 2018
50	Fourier series in an arbitrary interval	27 September 2018
51	<b>Tutorial:</b> Even & Odd periodic functions	28 September 2018
52	Even & Odd periodic functions	01 October 2018
53	Half range Sine & Cosine Expansions	03 October 2018
54	Problems on Half range Sine & Cosine Expansions	04 October 2018
55	<b>Tutorial:</b> Fourier Integral Theorem	05 October 2018
56	Problems on Fourier Sine & Cosine Integral	08 October 2018
57	Fourier Sine & Cosine Integral	10 October 2018
58	Problems on Fourier Transforms	11 October 2018
59	<b>Tutorial:</b> Problems on Fourier Transforms	12 October 2018
60	Fourier Sine & Cosine Transforms	22 October 2018
61	Fourier Sine & Cosine Transforms	23 October 2018
62	Properties	24 October 2018
63	Problems on Inverse Transforms	25 October 2018
64	<b>Tutorial:</b> Inverse Transforms	26 October 2018
65	Finite Fourier Transforms	29 October 2018
66	Problems on Finite Fourier Transforms	30 October 2018
67	Revision	31 October 2018
<b>UNIT-V: Applications of PDE</b>		
68	Classification of second order Partial Differential Equations	01 November 2018
69	<b>Tutorial:</b> Classification of second order Partial Differential Equations	02 November 2018
70	Problems on Method of separation of Variables	05 November 2018
71	Problems on Method of separation of Variables	06 November 2018
72	Solution of one dimensional wave equation, heat equation	08 November 2018
73	<b>Tutorial:</b> Revision	09 November 2018

**Text books:**

1. Higher Engineering Mathematics by Dr B S Grewal , Khanna publishers.
2. A text book of Engineering Mathematics by N P Bali, Manesh Goyal.
3. Engineering Mathematics-IV by T K V Iyengar and B Krishna Gandhi.

Name and signature of the faculty: T Suresh ----

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

