



Department of Basic Sciences and Humanities

Lesson Plan & Work-done Diary for AY:2024-25, ODD Semester

Course with Code: Mathematics-III for EE Engineering - BMATE 301				Faculty:			Semester & Section: III EEE	
Class No.	Date planned (DD/MM)	Topics to be covered	TLP Planned	Class No.	Date of Conduction (DD/MM)	Topics Covered	TLP Executed	Remarks if any deviation
Module-1 Ordinary Differential Equations of Higher Order								
1		Introduction, Solution of second and higher order homogeneous equations with constant coefficients by Inverse differential operator method	Chalk and Talk					
2		Solution of homogeneous D.E	Chalk and Talk					
3		Solution of homogeneous D.E and Finding y for F(x)=exponential and Trigonometric form,	Chalk and Talk					
4		Finding y for F(x)=Exponential and Trigonometric function	Chalk and Talk					
5		Finding y for f(x)= algebraic function	Chalk and Talk					
6		Solutions of Legendre's linear equations- and problems	Chalk and Talk					
7		Solutions of Cauchy's linear equations- problems	Chalk and Talk					
8		Application of linear differential equations to L-C circuit and L-C-R circuit.	Chalk and Talk					



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Module-3 Fourier series								
9		Harmonic analysis: problems	Chalk and Talk					
10		Harmonic analysis: problems	Chalk and Talk					
11		Half range Fourier sine and cosine series-Problems	Chalk and Talk					
12		Half range Fourier sine and cosine series-Problems	Chalk and Talk					
13		Introduction, Applications, Periodic functions, Even & Odd function, Euler's formulae, Solution of problems with period $(-\pi, \pi)$	Chalk and Talk					
14		Solution of problems with period $(-\pi, \pi)$. Solution of problems with period $(0, 2\pi)$	Chalk and Talk					
15		Solution of problems with period $(0, 2\pi)$ and $(-\pi, \pi)$.	Chalk and Talk					
16		solution of problems with period $(0, 2\pi)$ & solution of problems with period $(-\pi, \pi)$	Chalk and Talk					



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Module-2 Curve Fitting Correlation and Regression								
17		Correlation & Regression Lines, Introduction and problems	Chalk and Talk					
18		problems on Correlation & Regression Lines	Chalk and Talk					
19		Karl Pearson's Coefficient of Correlation & Rank Correlation	Chalk and Talk					
20		Karl Pearson's Coefficient of Correlation & Rank Correlation	Chalk and Talk					
21		Angle between regression lines and Rank Correlation	Chalk and Talk					
22		Curve fitting by the method of Least squares Fitting Curves of the form $y = ax+b$	Chalk and Talk					
23		Fitting Curves of the form $y = ax^b$	Chalk and Talk					
24		Fitting Curves of the form $y = ax^2+bx+c$	Chalk and Talk					

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Module-4 Fourier Transforms and Z-Transforms								
25		Standard Z-transforms-Linearity property, Damping rule, Shifting rule & problems	Chalk and Talk					
26		Problems on Z-transform. Initial value theorem, Final value theorem-Problems	Chalk and Talk					
27		Standard Inverse Z-transforms by Partial fraction	Chalk and Talk					
28		Problems on Inverse Z-transforms	Chalk and Talk					
29		Solution of difference equation using Z-transforms	Chalk and Talk					
30		Solution of difference equation using Z-transforms	Chalk and Talk					
31		Infinite Fourier transform and Inverse Fourier transform	Chalk and Talk					
32		Fourier transform and Fourier sine and Cosine transform	Chalk and Talk					
33		Fourier transform and Fourier sine and Cosine transform	Chalk and Talk					

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Module-5 Probability Distributions								
34		Discrete & Continuous RV with examples and Probability density function - Problems	Chalk and Talk					
35		Binomial Distribution, Introduction & Problems	Chalk and Talk					
36		More Problems on Binomial Distribution and Poisson Distribution, Introduction & Problems	Chalk and Talk					
37		Exponential Distribution - Problems	Chalk and Talk					
38		Normal Distribution, Introduction, Problems	Chalk and Talk					
39		Standard Normal Distribution & Problems	Chalk and Talk					
40		Sampling Theory, Inroduction, Testing of hypothesis – Null & Alternative hypothesis	Chalk and Talk					
41		Standard error, Type-1 & Type-2 errors, Test of significance & Confidence intervals	Chalk and Talk					
42		Student's t-distribution – Definition & Problems	Chalk and Talk					
43		Student's t-distribution and Chi-square distribution	Chalk and Talk					



	Activity	Planned	Actual	Remarks
1	Theory Classes	43		
2	Assignments/ Quizzes/ Self-study	5 Assignments, 5 quizzes		
3	Tutorials/ Extra classes	3	-	
4	Internal Assessments	3		
5	ICT based Teaching (% of usage in Curriculum)			
Planning			Execution	
Faculty Signature:			Faculty Signature:	
HoD Signature:			HoD Signature:	