

Lesson Plan & Work-done Diary for AY:2026-27, Odd Semester

Course with Code: Transforms and Statistics -IBMATME301				Faculty:			Semester & Section: III ME	
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-5: Statistics-2								
1		Principles of least squares, Curve fitting by the method of least squares in the form: $y=a+bx$	Chalk and Talk	1				
2		Curve fitting by the method of least squares in the form: $y=a+bx+cx^2$,	Chalk and Talk	2				
3		Curve fitting by the method of least squares in the form: $y=ax^b$.	Chalk and Talk	3				
4		Coefficient of correlation	Chalk and Talk	4				
5		Coefficient of correlation-Problems	Chalk and Talk	5				
6		Lines of regression	Chalk and Talk	6				
7		Angle between regression lines	Chalk and Talk	7				
8		Rank correlation.	Chalk and Talk	8				

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MODULE-1: Fourier Series								
9		Periodic functions, Euler's Formula, Conditions for Fourier series expansion	Chalk and Talk					
10		Fourier series of functions in $(-l, l)$	Chalk and Talk					
11		Fourier series of functions in $(0, 2l)$	Chalk and Talk					
12		Fourier series of Even and odd functions	Chalk and Talk					
13		Half range Fourier series	Chalk and Talk					
14		Half range Fourier series-Problems	Chalk and Talk					
15		Practical harmonic analysis.	Chalk and Talk					
16		Practical harmonic analysis-Problems	Chalk and Talk					

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MODULE-4: Statistics-1								
17		Measures of central tendency: mean, median, mode for grouped	Chalk and Talk					
18		Measures of central tendency: mean, median, mode for grouped data.	Chalk and Talk					
19		Measures of central tendency: mean, median, mode for ungrouped data.	Chalk and Talk					
20		Measures of central tendency: mean, median, mode for ungrouped data.	Chalk and Talk					
21		Measures of dispersion: range, variance, standard deviation, and coefficient of variation.	Chalk and Talk					
22		Measures of dispersion: range, variance, standard deviation, and coefficient of variation.	Chalk and Talk					
23		Concept of skewness and kurtosis.	Chalk and Talk					
24		Concept of skewness and kurtosis.	Chalk and Talk					

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MODULE-3: Partial differential equations								
25		Partial Differential Equations: Definitions, Formation of PDE by eliminating arbitrary constants	Chalk and Talk					
26		Formation of PDE by eliminating arbitrary functions	Chalk and Talk					
27		Solution of non-homogeneous PDE by direct integration	Chalk and Talk					
28		Lagrange's multiplier method	Chalk and Talk					
29		Numerical solution of PDE: Classification of second order PDE	Chalk and Talk					
30		Numerical solution of One-dimensional Heat equations	Chalk and Talk					
31		Numerical solution of One-dimensional Wave equations	Chalk and Talk					
32		Numerical solution of One-dimensional Wave equations-Problems	Chalk and Talk					
33		Numerical solution of two-dimensional Laplace equation	Chalk and Talk					

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MODULE-2: Fourier Transform & Z-Transform								
34		Infinite Fourier transforms: Definition, Fourier transforms	Chalk and Talk					
35		Infinite Fourier transforms: Definition, Fourier transforms-Problems	Chalk and Talk					
36		Fourier cosine transforms-Problems	Chalk and Talk					
37		Fourier sine transforms-Problems	Chalk and Talk					
38		Z-transforms: Definition, Standard Z-transforms-Problems	Chalk and Talk					
39		Damping and shifting rules-Problems	Chalk and Talk					
40		Statements of initial value theorem and Final Value Theorem (statements only)	Chalk and Talk					
41		Inverse Z-transform	Chalk and Talk					
42		Inverse Z-transform	Chalk and Talk					

	Activity	Planned	Actual	Remarks
1	Theory Classes	42		
2	Assignments/ Quizzes/ Self-study	5 Assignments and 5 Quizzes		
3	Tutorials/ Extra classes	20		
4	Internal Assessments	3		
5	ICT based Teaching (% of usage in Curriculum)			
Planning			Execution	
Faculty Signature:			Faculty Signature:	
HoD Signature:			HoD Signature:	