

## LESSON PLAN

Discipline: <b>Electrical Engineering</b>		Semester: <b>3<sup>rd</sup> semester</b>	Name of the Teaching Faculty: <b>PTGF</b>	
Subject: <b>Engineering Mathematics-III</b> Sub code: <b>Th-1</b>		No of days /week class allotted: <b>02/week</b>	Semester from Date: <b>15/09/2022 to 22/12/2022</b> No of weeks: <b>15</b>	
Month	Week	No of periods available	Class Day	Theory topics to be covered
September	1 <sup>st</sup>	01P	16.09.2022	<b>Chapter 2: MATRICES</b> Define Rank of a Matrix. Perform Elementary Row Transformations to Determine the Rank of a Matrix
	2 <sup>nd</sup>	02P	20.09.2022	State Rouche's Theorem for Consistency of a System of Linear Equations in $n$ unknowns.
			23.09.2022	Solve Equations in three unknowns testing Consistency
	3 <sup>rd</sup>	02P	27.09.2022	<b>Chapter 3: LINEAR DIFFERENTIAL EQUATIONS</b> Define homogeneous and non-homogeneous Linear Differential Equations with constant coefficients with Examples
			30.09.2022	Find General Solution of Linear Differential Equations in terms of C.F. and P.I.
October	4 <sup>th</sup>	02P	11.10.2022	Derive rules for finding C.F. and P.I. in terms of operator D
			14.10.2022	Problems
	5 <sup>th</sup>	02P	18.10.2022	Define Partial Differential Equation (P.D.E.)
			21.10.2022	Form Partial Differential Equations by eliminating arbitrary constants and arbitrary functions
	6 <sup>th</sup>	02P	25.10.2022	Solve Partial Differential Equations of the form $Pp + Qq = R$
			28.10.2022	Problems
November	7 <sup>th</sup>	02P	01.11.2022	<b>Monthly Test-02</b>
			04.11.2022	<b>Chapter 5: FOURIER SERIES</b> Define Periodic functions with Examples. State Dirichlet's condition for the Fourier expansion of a function and its Convergence
	8 <sup>th</sup>	01P	11.11.2022	Express Periodic function $f(x)$ satisfying Dirichlet's conditions as a Fourier series
	9 <sup>th</sup>	02P	15.11.2022	<b>Revision and Doubt Clearing classes &amp; Internal Assessment</b>
			18.11.2022	
	10 <sup>th</sup>	02P	22.11.2022	State Euler's formulae Formulae for Fourier series coefficients
			25.11.2022	Problems on finding Fourier series coefficients
11 <sup>th</sup>	01P	29.11.2022	Define Even and Odd functions Find Fourier series of Even and Odd functions in $(0 \leq x \leq 2\pi$ and $-\pi \leq x \leq \pi)$	

December

12 <sup>th</sup>	01P	02.12.2022	Obtain Fourier series of continuous functions in $(0 \leq x \leq 2\pi$ and $-\pi \leq x \leq \pi)$ and Problems
13 <sup>th</sup>	02P	06.12.2022	Obtain Fourier series of functions having points of discontinuity $(0 \leq x \leq 2\pi$ and $-\pi \leq x \leq \pi)$ and Problems
		09.12.2022	<b>Chapter 6: NUMERICAL METHODS</b> Appraise Limitation of Analytical Methods of solution of Algebraic Equations
14 <sup>th</sup>	02P	13.12.2022	Derive Iterative formula for finding the solutions of Algebraic Equations by Bisection method
		16.12.2022	Derive Iterative formula for finding the solutions of Algebraic Equations by Newton-Raphson method
15 <sup>th</sup>	01P	20.12.2022	<b>Revision &amp; Previous year question &amp; Answer discussion.</b>
<b>. VERY SIMILAR TEST/MOCK TEST</b>			

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PTGF In Math  
OSME, Keonjhar.

