

## Lesson Plan (2025-26)

**Name** : Dr. Priya  
**Discipline** : Common for all branches  
**Semester** : 2<sup>nd</sup>  
**Subject** : Applied Mathematics II  
**Code** : 250022  
**Duration** : 15/01/2026- 30/04/2026  
**Load** : 4 Lectures per week

Lecture No.	Theory
	Topics
1	Functions, Concept of limits, Standard limits and related problems.(L-1)
2	Concept of limits, Standard limits and related problems.(L-2)
3	First Principle of Differentiation
4	Differentiation of sum, subtraction and product of functions and related problems.
5	Differentiation of quotient of functions and related problems.
6	Differentiation of Algebraic and Trigonometric functions.
7	Differentiation of Trigonometric and Inverse Trigonometric functions.
8	Logarithmic Differentiation.
9	Successive differentiation (up to 2 <sup>nd</sup> order). (L-1)
10	Successive differentiation (up to 2 <sup>nd</sup> order). (L-2)
11	Application of differential calculus in Rate measures. (L-1)
12	Application of differential calculus in Rate measures. (L-2)
13	Application of differential calculus in Maxima and minima. (L-1)
14	Application of differential calculus in Maxima and minima. (L-2)
15	Integration as inverse operation of differentiation i.e. Indefinite Integral with simple examples.
16	Indefinite Integral. (L-2)
17	Simplest and hard integrals and related Simple problems.
18	Integration by Substitution Method.
19	Integration by parts and related Simple problems.
20	Evaluation of $\int_{\delta}^{\epsilon} \ln^n x dx$ and $\int_{\delta}^{\epsilon} \cos^n x dx$ and related problems.
21	Evaluation of $\int_{\theta}^{\pi} \sin^n x dx$ and related problems.
22	Applications of integration: for evaluation of area under a curve and axes.(L-1)
23	Applications of integration: for evaluation of area under a curve and axes.(L-2)
24	Numerical integration by Trapezoidal Rule existing mathematical models.(L-1)
25	Numerical integration by Trapezoidal Rule existing mathematical models.(L-2)
26	Numerical integration by Simpson's 1/3 <sup>rd</sup> existing mathematical models.(L-1)
27	Numerical integration by Simpson's 1/3 <sup>rd</sup> existing mathematical models.(L-2)
28	Definition, order, degree and linearity of an ordinary differential equation.
29	Formulation of Differential Equations.
30	Solution of 1 <sup>st</sup> order and 1 <sup>st</sup> degree of differential equation by variable separable method.
31	Measures of Central Tendency: Mean and related problems.
32	Measures of Central Tendency: Median and related problems.

33	Measures of Central Tendency: Mode and related problems.
34	Measures of Dispersion: Mean deviation.
35	Measures of Dispersion: Standard deviation.
36	SciLab Software-Theoretical Introduction.
37	Basic differences between MATLAB and SciLab Software.
38	Calculation with MATLAB or SciLab: Representation, Addition and Subtraction of Matrices.
39	Revision of UNIT-I
40	Revision of UNIT-I
41	Revision of UNIT-II
42	Revision of UNIT-II
43	Revision of UNIT-III
44	Revision of UNIT-III
45	Revision of UNIT-IV
46	Revision of UNIT-IV
47	Revision of UNIT-V
48	Revision of UNIT-V

Note: There will be Class Test, Assignment work and Sessional Exam., Quizzes etc. will be given as per Academic Calendar.

*Priya*  
13/01/2026

Dr. Priya  
Lecturer in Mathematics

*NK*  
13/01/26

PAC Member 1  
(Sh. Narendra Kumar)

*S*  
13/01/26

PAC Member 2  
(Smt. Sonia)

*Jyoti*  
13/01/26

PAC Member 3  
(Dr. Jyoti Gupta)