Lesson Plan (2025-2026)

Name : **Dr. Priya**
Discipline : **Applied Sciences (Common for all branches)**
Subject : **Applied Mathematics**
Year : **1st Sem.**
Code : **220012**
Duration : **04/08/2025-26/11/2025**
Workload : **4 Lectures per week**

Lecture No.	Theory Topic
1	Complex Numbers: defination of complex number, real and imaginary parts of a complex number. Polar and cartesian form and their inter conversion
2	Conjugate of a complex number, modulus and amplitude
3	Addition, subtraction, multiplication and division of complex number
4	Revision
5	Logarithms and its basic properties
6	Revision
7	Binomial theorem (mathematical expression)
8	Binomial theorem (without proof) for: positive intergral index (expansion and general form)
9	Revision
10	Binomial theorem for any index (expansion up to 3 terms-without proof)
11	First binomial approximation with application to engineering problems
12	Revision
13	Determinants Evaluation
14	Determinants and Matrices- Evaluation of determinants (upto 2nd order)
15	Revision
16	Solution of equations (up to 2 unknowns) by Cramer's rule
17	Definitionof Matrices and its types, addition, subtraction (upto 2nd order)
18	multiplication of matrices (upto 2nd order) L-1
19	multiplication of matrices (upto 2nd order) L-2
20	Revision
21	Concepts of angle, measurement of angle in degrees, grades, radians and their conversions
22	T-Ratios of Allied angles (without proof), sum, difference formulae and their applicationa (without proof)
23	Revision
24	Product formula (transformation of product to sum, difference and vice versa0
25	Applications of trigonometric terms in engineering problems such as to find an angle of elevation, height, distance etc
26	Revision
27	Cartesian and plar co-ordinates (two dimensional), distancebetween two points
28	mid-point of a triangle
29	centriod of vertices of a triangle
30	Revision
31	Slope of a line, equation of straight lines in various standards forms (without proof) L-1
32	Slope of a line, equation of straight lines in various standards forms (without proof) L-2
33	Slope intercept form, intercept form, one-point form, two-point form, symmetric form
34	normal form, general form of slope
35	Revision

36	intersection of two straight lines, concurrency of lines, angle between straight lines
37	Revision
38	parallel and perpendicular lines, perpendicular distance formula, conversion of general form of equation to the various forms
39	Revision
40	Center and radius (L-1)
41	Center and radius (L-2)
42	General equation of a circle and its characteristics to find the equation of a circle
43	Revision
44	MATLAB or SciLab software- Theoretical introduction, MATLAB or SciLab
45	Notebook Checking
46	Revision
47	Simple Calculator (Addition and subtracton of values- Trigonometric and inverse function
48	General practice of MATLAB (L-1)
49	General practice of MATLAB (L-2)
50	Reviasion

Note: There will be class Tests, Assignments, Sessional Exams and Quizzes etc. will be given as per Academic Calendar.

28/07/25

28/7/25

PAC Committee
Member - 1
(Sh. Narender Rana)

28/7/25

PAC Committee
Member - 2
(Smt. Sonia)

Jyoti 28/7/25

PAC Committee
Member -3
(Dr. Jyoti Gupta)