

PANIPAT INSTITUTE OF ENGINEERING AND TECHNOLOGY
PANIPAT
DEPARTMENT OF APPLIED SCIENCES & HUMANITIES

LESSON PLAN

Name: - Dr Megha

Subject Name: - Calculus and Linear Algebra

Branch/Semester: -1th Sem. (Session 20223-24)

Subject Code: - BS-133A

Sr. No.	LectureNo.	Description of Topic	Lecture plandate	Methodology	Course Outcome
1	L1	Introduction- CO, subject,books,exam pattern	22/8/23	Discussion	
2	L2	Matrices, vectors: addition and scalar multiplication	23/8/23	Lecture method	CO1
3	L3 Content beyond syllabus	Determinant and their properties	24/8/23	Flip Learnin g	
4	L4	Matrix multiplication	25/8/23	Lecture method	
5	L5	Linear systems of equations	28/8/23	Lecture method	CO1
6	L6	Synthetic division	29/8/23	Lecture method	
7	L7	Linear systems of equations	31/8/23	Lecture method	CO1
8	L8	Linear systems of equations	1/9/23	Lecture method	
9	L9	Linear Independence of Vectors	4/9/23	Lecture method	CO5
10	L10	Rank of a matrix	5/9/23	Lecture method	CO4
11	L11	Triangular form	6/9/23	Lecture method	CO4
12	L12	Normal forms	8/9/23	Lecture method	CO4

13	L13	Cramer's Rule	11/9/23	Lecture method	CO1
14	L14	Problems	12/9/23	Lecture method	
15	L15	Inverse of a matrix	13/9/23	Lecture method	CO4
16	L16	Problems	14/9/23	Lecture method	
17	L17	Gauss elimination and Gauss Jordan	15/9/23	Lecture method	CO4
18	L18	Test 1	18/9/23		
19	L19	Problems	19/9/23	Lecture method	
20	L20	Unit 4: Vector Space: Introduction	20/9/23		
21	L21	Eigen values	21/9/23	Lecture method	CO4
22	L22	Eigen values Problems	22/9/23	Lecture method	
23	L23	Eigenvectors	25/9/23	Lecture method	
24	L24	Eigenvectors Problems	26/9/23	Lecture method	
25	L25	Symmetric, skew-symmetric matrices	27/9/23	Lecture method	
26	L26	Properties of Symmetric, skew-symmetric matrices	3/10/23	Lecture method	
27	L27	Symmetric, skew-symmetric matrices Problems	4/10/23	Flip Learning	
28	L28	Orthogonal Matrices	5/10/23	Explanation Method	
29	L29	Properties of Orthogonal Matrices	6/10/23	Lecture method	
30	L30	Eigen Bases	10/10/23	Lecture method	
32	L32	Orthogonal Bases	12/10/23	Lecture method	

33	L33 Content beyond syllabus	Cayley Hamilton theorem	13/10/23	13/10/23	
34	L34	Inner product spaces	16/10/23	Lecture method	CO5
35	L35	Inner product spaces problems	17/10/23	Lecture method	
36	L36	Problems	18/10/23	Lecture method	
37	L37	Unit 1: Introduction Beta and Gamma Function	19/10/23	Lecture method	CO2
38	L38	Properties of Beta and Gamma Function	20/10/23	Lecture method	CO2
39	L39	Properties of Beta and Gamma Function	23/10/23	Lecture method	CO2
40	L40	Problems	25/10/23	Lecture method	CO2
41	L41	Applications of definite integrals to evaluate surface areas.	30/10/23	Lecture method	CO2
42	L42	Continued.....	31/10/23	Lecture method	CO2
43	L43	Applications of definite integrals to evaluate volumes of revolutions.	2/11/23	Lecture method	CO2
44	L44	Continued.....	3/11/23	Lecture method	CO2
45	L45	Rolle's Theorem	6/11/23	Lecture method	CO2
46	L46	Lagrange's Mean Value theorem	7/11/23	Lecture method	CO2
47	L47 Content beyond syllabus	Cauchy's Mean value theorems	8/11/23	Lecture method	CO2

48	L48	Problems	9/11/23	Lecture method	CO2
49	L49	Problems	16/11/23	Lecture method	CO2
50	L50	Indeterminate forms	17/11/23	Lecture method	CO2
51	L51	L'Hospital's rule.	20/11/23	Lecture method	CO2
52	L52	Test 2	21/11/23	Lecture method	
53	L53	Unit 3: Vector Space: Introduction	23/11/23	Lecture method	
54	L54	Group and Field	24/11/23	Lecture method	CO5
55	L55	linear dependence of vectors	1/12/23	Lecture method	CO5
56	L56	Vector space	4/12/23	Lecture method	CO5
57	L57	Subspace	5/12/23	Lecture method	CO5
58	L58	Basis, dimension	6/12/23	Lecture method	CO5
59	L59	Linear transformations (maps)	7/12/23	Lecture method	CO5
60	L60	range and kernel of a linear map	8/12/23	Lecture method	CO5
61	L61	Inverse of a linear transformation	9/12/23	Lecture method	CO5
62	L62	rank nullity theorem	12/12/23	Lecture method	CO5
63	L63	composition of linear maps	14/12/23	Lecture method	CO5
64	L64	Test 3	15/12/23		
65	L65	Revision	18/12/23		
66	L66	Revision	19/12/23		

67	L67	Revision	20/12/23		
68	L68	Revision	21/12/23		
69	L69	Revision	22/12/23		

*Highlighted part represents Content beyond Syllabus topics

* Quizzes on Saturdays

Subject In charge