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

LESSON PLAN

Name: - Dr Anita **Subject Name: - Calculus and Linear Algebra**
Branch/Semester: -1th Sem. (Session 2022-23) **Subject Code:- BS-133A**

Sr. No.	Lecture No.	Description of Topic	Lecture plan date	Executed date	Methodology	Course Outcome
1	L1	***Introduction-CO, subject,books,exam pattern***	7/10/22		Discussion and Board	
2	L2	Matrices, vectors: addition and scalar multiplication	10/10/22		Lecture method	CO1
3	L3	Matrix multiplication	11/10/22		Lecture method	
4	L4	Linear systems of equations	12/10/22		Lecture method	CO1
Content beyond syllabus		Synthetic division	10/11/21	13/10/22	Flip learning	
5	L5	Linear systems of equations	14/10/22		Lecture method	CO1
6	L6	Linear systems of equations	17/10/22		Lecture method	
7	L7	Linear Independence of Vectors	21/10/22		Lecture method	CO5
8	L8	Rank of a matrix	28/10/22		Lecture method	CO4
9	L9	Cramer's Rule	31/10/22		Lecture method	CO1
10	L10	Problems	1/11/22		Lecture method	
11	L11	Inverse of a matrix	3/11/22		Lecture method	CO4

12	L12	Problems	4/11/22		Lecture method	
13	L13	Gauss elimination and Guass Jordan	8/11/22		Lecture method	CO4
14	L14	Test 1	9/11/22		Lecture method	
15	L15	Problems	10/11/22		Lecture method	
16	L16	***Unit 4: Vector Space:Introduction***	11/11/22		Lecture method	
17	L17	Eigenvalues	14/11/22		Lecture method	CO4
18	L18	Eigenvalues Problems	15/11/22		Lecture method	
19	L19	Eigenvectors	16/11/22		Lecture method	
20	L20	Eigenvectors Problems	17/11/22		Lecture method	
21	L21	Symmetric, skew-symmetric matrices	18/11/22		Lecture method	
22	L22	Symmetric, skew-symmetric matrices Problems	21/11/22		Flip Learning	
23	L23	Orthogonal Matrices	28/11/22		Lecture method	
24	L24	Eigenbases	29/11/22		Lecture method	
25	L25	Diagonalization	30/11/22		Lecture method	
Content beyond syllabus		Cayley Hamilton theorem	1/12/21		Lecture method	
26	L27	Inner product spaces	2/12/22		Lecture method	CO5
27	L28	Inner product spaces problems	5/12/22		Lecture method	
28	L28	Problems	6/12/22		Lecture method	
29	L29	Unit 1: Introduction Beta and Gamma Function	7/12/22		Lecture method	CO2

30	L30	Properties of Beta and Gamma Function	6/12/22		Lecture method	CO2
31	L31	Properties of Beta and Gamma Function	7/12/22		Lecture method	
32	L32	Problems	8/12/22		Lecture method	
33	L33	Applications of definite integrals to evaluate surface areas.	9/12/22		Lecture method	CO2
34	L34	Continued.....	12/12/22		Lecture method	
35	L35	Applications of definite integrals to evaluate volumes of revolutions.	13/12/22		Lecture method	
36	L36	Continued.....	14/12/22		Lecture method	
37	L37	Rolle's Theorem	15/12/22		Lecture method	CO3
38	L38	Mean value theorems	16/12/22		Lecture method	
39	L39	Problems	19/12/22		Lecture method	
40	L40	Indeterminate forms	20/12/22		Lecture method	
41	L41	L'Hospital's rule.	21/12/22		Lecture method	
42	L42	Test 2	22/12/22			
43	L43	***Unit 3: Vector Space: Introduction***	23/12/22		Lecture method	
Content beyond syllabus		***Group and Field***	16/1/22	29/12/22	Lecture method	
		linear dependence of vectors	30/12/22		Lecture method	CO5
44	L44	Basis, dimension	31/12/22		Lecture method	
45	L45	Linear transformations (maps)	2/1/23		Lecture method	
46	L46	range and kernel of a linear map	2/1/23		Lecture method	

47	L47	rank and nullity	3/1/23		Lecture method	CO5
48	L48	rank and nullity	4/1/23		Lecture method	
49	L49	Inverse of a linear transformation	6/1/23		Lecture method	
50	L50	rank nullity theorem	10/1/23		Lecture method	CO5
51	L51	composition of linear maps	11/1/23		Lecture method	
52	L52	***Test 3***	12/1/23			

***Highlighted part represents Content beyond Syllabus topics**

*** Quizzes on Saturdays**

Subject In charge