

Curriculum Plan: Generic (Maths) 4th Year (Sem VI) Topics in Multivariate Calculus ODD SEM (2025-26)

Teacher Profile: Anjali Department of Mathematics Kalindi College, University of Delhi, Delhi- 110008 Mobile: +91-8708175676 E-mail: anjali@kalindi.du.ac.in		Marks Distribution	Theory	90 Marks
			Internal Assessment	Assignments 12 Marks Class- Test 12 Marks Attendance 6 Marks
			Tut Assessment	40 Marks
			Total Marks	160
			Classes Assigned	Lectures 3 per week
			Reference	[1]
Section	Week			
Session 1	1 st week	Basic Concepts, Limits, and Continuity of functions of two variables.		
	2 nd week	Partial differentiation, total differentiability, and differentiability. sufficient condition for differentiability.		
Session 2	3 rd week	Chain rule for one and two independent parameters, directional derivatives.		
	4 th week	The gradient, normal plane, and tangent planes.		
	5 th week	Extrema of functions of two variables.		
	6 th week	Method of Lagrange multipliers with one constraint. Assessment problems.		
Session 3	7 th week	Double integration over a rectangular region. double integration over a non-rectangular region.		
	8 th week	Double integrals in polar coordinates, Triple integral over a parallelepiped and solid regions.		
	9 th week	Volume by triple integrals, Triple integration in cylindrical and spherical coordinates,		
	10 th week	Change of variables in double and triple integrals.		
Session 4	11 th week	Line integrals, Applications of line integrals: Mass and Work.		
	12 th week	Fundamental theorem for line integrals, Conservative vector fields.		
	13 th week	Green's theorem, Area as a line integral, Surface integrals.		
	14 th week	Stokes' theorem, Gauss divergence theorem.		
Session 5	15 th , 16 th week	Revision and assignment Problems		