

Curriculum Plan: B. Sc. (Hons) Mathematics (Semester VII)- Fundamentals of Topology (2026-27). ODD SEM

DR. ABHISHEK KR. SINGH Assistant Professor Department of Mathematics Kalindi College University of Delhi Delhi- 110008 Mobile: +91-8375834510 Email: abhishek@kalindi.du.ac.in			Marks Distribution	Theory -
				Internal Assessment-
			Classes Assigned	Lectures: 3 per week
	References	Shirali, Satish & Vasudeva, H. L. (2009). Metric Spaces. Springer. Indian Reprint 2019. Munkers James R. (2000). Topology (2ND ed). Prentice Hall Of India Pvt. Ltd.		
	Week	Topics		
	1st week	PROPERTIES OF METRIC SPACES. SPACES OF SEQUENCES OF NUMBERS.		
	2nd week	CONVERGENCE AND COMPACTNESS, COMPLETION OF A METRIC SPACES.		
	3rd week	LOCAL BASE AND BASE. FIRST AND SECOND AXIOM OF COUNTABILITY.		
	4th week	SEPARABLE AND LINDELOF SPACES.		
	5th week	NOWHERE DENSE SUBSETS. CATEGORY I AND II SETS.		
	6th week	BAIRE CATEGORY THEOREM.		
	7th week	EXTENSION THEOREMS.		
	8th week	TIETZE'S THEOREM		
	9th week	LOCAL CONNECTEDNESS. ARCWISE CONNECTEDNESS.		
	10th week.	TOTALLY BOUNDED SETS.		
	11th week	TOPOLOGY. BASIS AND SUBBASIS FOR TOPOLOGY.		
	12th week	PRODUCT AND SUBSPACE TOPOLOGY.		
	13th week	CLOSED SETS. HOUSEDORFF SPACES.		
	14th week	CONTINUOUS FUNCTIONS. HOMEOMORPHISM. PRODUCT TOPOLOGY.		
	15th week	CONNECTEDNESS AND COMPACTNESS.		