Curriculum Plan: B.Sc. (Hons) Mathematics (Semester VI)- Abstract Algebra (GE)
2024-25 Even Sem

Mr. Manish Kumar
Assistant Professor
Department of Mathematics
Kalindi College
University of Delhi
Delhi- 110008
Mobile: 7503244811
E- mail: manishkumar@kalindi.du.ac.in

		Marks Distribution	**Theory** - 90
			Internal Assessment- 30 **Tutorial – 40**
		Classes Assigned	**Lectures: 3 per week**
	References	**1.** Gallian, Joseph. A. {2017). Contemporary Abstract Algebra (9th ed.). Cengage Learning India Private Limited, Delhi. Indian Reprint (2021). **2.** Beachy, John A., & Blair, William D. {2006). Abstract Algebra (3rd ed.). Waveland Press.	
	Week	**Topics**	
	1st week	Modular arithmetic; Definition and examples of groups	
	2nd week	Elementary properties of groups	
	3rd week	Order of a group and order of an element of a group; Subgroups and its examples	
	4th week	Subgroup tests; Center of a group and centralizer of an element of a group.	
	5th week	Cyclic groups and its properties, Generators of a cyclic group	
	6th week	Group of symmetries; Permutation groups, Cyclic decomposition of permutations and its properties,	
	7th week	Even and odd permutations and the alternating group.	
	8th week	Cosets and Lagrange's theorem	
	9th week	Definition and examples of normal subgroups, Quotient groups	
	10th week	Group homomorphisms and properties	
	11th week	Definition, examples and properties of rings, subrings,	
	12th week	fields, integral domains	
	13th week	Characteristic of a ring.	
	14th week	Ideals and factor rings	
	15th week	Ring homomorphisms and properties	