

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI**COURSE PLAN (June - November 2026)****Department : Mathematics****Name/s of the Faculty : Dr. S. Sarah Surya (3 hours) & Dr. Chinthamani S (3 hours)****Course Title : Algebraic Structures****Course Code : 23MT/MC/AS55****Shift : I****COURSE OUTCOMES (COs)**

COs	Description	CL
CO1	To define and recall the basic concepts of algebraic structures	K1
CO2	To understand the concepts of groups, rings and fields	K2
CO3	To apply appropriate methods to solve related problems in abstract algebra	K3
CO4	To analyze and examine the concepts of groups and rings through illustrations and examples	K4
CO5	To prove the concepts of groups, rings and fields and evaluate the related problems	K5

Week	Unit No.	Content	Cognitive Level	Teaching Hours	COs	Teaching Learning Methodology	Assessment Methods
Jun 15 – 22, 2026 (Day Order 1- 6)	1 4	Group Theory 1.1 Elementary Properties of Groups Group Homomorphism 4.1 Properties of Homomorphisms	K1-K5	3+3	CO1-CO5	Problem solving, group discussions, assignments	Questioning & slip test
Jun 23 – July 1, 2026 (Day Order 1- 6)	1 4	Group Theory 1.2 Finite Groups Group Homomorphism 4.2 The First Isomorphism Theorem	K1-K5	3+3	CO1-CO5	Problem solving, group discussions, assignments	Questioning & slip test
July 2 – July 8, 2026 (Day Order 1- 6)	1 4	Group Theory 1.3 Subgroups Ring Theory 4.3 Properties of Rings	K1-K5	3+3	CO1-CO5	Problem solving, group discussions, assignments	Questioning & slip test
July 9 – 16, 2026 (Day Order 1- 6)	1	Group Theory 1.4 Cyclic Groups –	K1-K5	3+3	CO1-CO5	Problem solving, group discussions,	Questioning & slip test

Aug 4 - 6, 2026 (Day Order 4 - 6)	2 5	Permutation Groups 2.1 Cycle Notation More on Ring Theory 5.1 Ideals and Factor Rings	K1-K5	1+2	CO1-CO5	Problem solving, group discussions, assignments	Questioning & slip test
Aug 7 – 14, 2026 (Day Order 1- 6)	2 5	Permutation Groups 2.2 Properties of Permutations More on Ring Theory 5.1 Ideals and Factor Rings	K1-K5	3+3	CO1-CO5	Problem solving, group discussions, assignments	Questioning & slip test
Aug 17 - 24, 2026 (Day Order 1- 6)	2 5	Isomorphisms 2.3 Cayley's Theorem More on Ring Theory 5.2 Prime Ideals and Maximal Ideals	K1-K5	3+3	CO1-CO5	Problem solving, group discussions, assignments	Questioning & slip test
Aug 25 – Sep 2, 2026 (Day Order 1- 6)	2 5	Isomorphisms 2.4 Properties of Isomorphisms More on Ring Theory	K1-K5	3+3	CO1-CO5	Problem solving, group discussions, assignments	Third Component Test: 20 marks – Problem

		5.2 Prime Ideals and Maximal Ideals					solving – Units I & II
Sep 3 – 11, 2026 (Day Order 1- 6)	2 5	Isomorphisms 2.5 Automorphisms More on Ring Theory 5.3 Ring Homomorphisms	K1-K5	3+3	CO1-CO5	Problem solving, group discussions, assignments	Questioning & slip test
Sep 15-17, 2026 (Day Order 1 - 3)	3 5	Cosets and Lagrange's Theorem 3.1 Properties of Cosets More on Ring Theory 5.4 Properties of Ring Homomorphisms	K1-K5	2+1	CO1-CO5	Problem solving, group discussions, assignments	Questioning & slip test
Sep 18 –23, 2026	C.A. Test – II [Part of units 2 & 5]						
Sep 24 - 28, 2026 (Day 4 – 6)	3 3	Cosets and Lagrange's Theorem 3.1 Properties of Cosets Normal Subgroups and Factor Groups 3.4 Normal subgroups	K1-K5	1+2	CO1-CO5	Problem solving, group discussions, assignments	Questioning & slip test

Sep 29 – Oct 7, 2026 (Day Order 1 - 6)	3	Cosets and Lagrange's Theorem 3.2 Lagrange's Theorem and Consequences	K1-K5	3+3	CO1-CO5	Problem solving, group discussions, assignments	Third Component Test: 20 marks – Quiz Test – Units III & V
	3	Normal Subgroups and Factor Groups 3.4 Normal subgroups 3.5 Factor Groups					
Oct 8 - 14, 2026 (Day Order 1 - 6)	3	Cosets and Lagrange's Theorem 3.3 An Application of Cosets to Permutation Groups	K1-K5	3+3	CO1-CO5	Problem solving, group discussions, assignments	Questioning & slip test
	3	Normal Subgroups and Factor Groups 3.5 Factor Groups					
Oct 15 - 21, 2026 (Day Order 1- 4)	REVISION						