

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI**COURSE PLAN (June - November 2026)**

Department : Mathematics
Name/s of the Faculty : Dr. S. Mercy Soruparani
Course Title : Patterns in Nature
Course Code : 25MT/GE/PN22
Shift : I

COURSE OUTCOMES (COs)

COs	Description						CL
CO1	recognize different patterns found in nature, art and structures around us						K1
CO2	describe appearance and significance of patterns						K2
CO3	application of the knowledge of patterns in art and architecture in everyday life						K3
Week	Unit No.	Content	Cognitive Level	Teaching Hours	COs	Teaching Learning Methodology	Assessment Methods
Jun 15 – 22, 2026 (Day Order 1- 6)	1	Series Representation 1.1 Fractals in nature	K1- K3	2	CO1-3	PPT Presentation, Lecture & Problem	Group Discussion

						Solving	
Jun 23 – July 1, 2026 (Day Order 1- 6)	1	Series Representation 1.2 Hexagonal Patterns in nature	K1- K3	2	CO1-3	Lecture & Problem solving through technical forum like Mind map	Short Q/A
July 2 – July 8, 2026 (Day Order 1- 6)	1	Series Representation 1.3 Golden Ratio in Arts and Universe	K1- K3	2	CO1-3	Lecture & Problem Solving	Third Component Test: Identifying mathematical and fractal patterns in animal kingdom, plant growth, space, art and architecture 15 marks
July 9 – 16, 2026 (Day Order 1- 6)	1	Series Representation 1.4 Examples of Similar Curves	K1- K3	2	CO1-3	Lecture & Problem Solving	Group Discussion
July 17 – 24, 2026 (Day Order 1- 6)	2	Spiral Pattern 2.1 Logarithmic Spiral in Animal Kingdom, Plant Growth	K1- K3	2	CO1-3	Lecture & Problem Solving	Presentation
July 25 – 28, 2026 (Day Order 1- 3)	2	Spiral Pattern 2.2 Planetary Orbits and	K1- K3	1	CO1-3	Lecture & Problem	Group Discussion

		Fibonacci Ratios				Solving	
July 29 – Aug 3, 2026	C.A. Test – I (No CA)						
Aug 4 - 6, 2026 (Day Order 4 - 6)	2	Spiral Pattern 2.2 Planetary Orbits and Fibonacci Ratios	K1- K3	1	CO1-3	Lecture & Problem Solving	Group Discussion
Aug 7 – 14, 2026 (Day Order 1- 6)	2	Spiral Pattern 2.3 Geometric Patterns in Space	K1- K3	2	CO1-3	Presentation, Lecture & Problem Solving	Mind map
Aug 17 - 24, 2026 (Day Order 1- 6)	2	Spiral Pattern 2.4 Examples of Similar Curves	K1- K3	2	CO1-3	Lecture & Problem Solving	Third Component Test: Project demonstrating real-life applications of patterns in nature, art, architecture, planetary motion, tessellations and catenary curves 20 marks
Aug 25 – Sep 2, 2026 (Day Order 1- 6)	2	Spiral Pattern 2.4 Examples of Similar Curves	K1- K3	2	CO1-3	Lecture & Problem Solving	Questioning

