

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

Department : PHYSICS
Name/s of the Faculty : DR. BELINA XAVIER
Course Title : FUNDAMENTALS OF PHYSICS
Course Code : 25PH/SE/FP12
Shift : I

COURSE OUTCOMES (COs)

COs	Description						CL
CO1	recall the definitions and fundamental laws of physics both theory and practical.						K1
CO2	understand the basic principles and concepts of physics.						K2
CO3	Apply the fundamental concepts of theoretical and practical physics to solve problems and experimentally determine the physical properties.						K3
Week	Unit No.	Content	Cognitive Level	Teaching Hours	COs	Teaching Learning Methodology	Assessment Methods
Jun 22, 2026 (Day Order 6)							
Jun 23 – July 1, 2026	1 and 3	Introductory Mechanics	1-3	2	1-3	Lecture cum	Quiz on the

(Day Order 1- 6)		1.1 vectors, scalars – examples for scalars and vectors from physical quantities Introductory Physics Laboratory 3.1 Vernier Calipers				demonstration, Problem solving	content taught Experimental assessment
July 2 – July 8, 2026 (Day Order 1- 6)	1 and 3	Introductory Mechanics addition, subtraction of vectors – resolution and resultant of vectors Introductory Physics Laboratory Screw gauge	1-3	2	1-3	Lecture cum demonstration, Problem solving	Problem solving Experimental assessment
July 9 – 16, 2026 (Day Order 1- 6)	1 and 3	Introductory Mechanics units and dimensions– standard physics constants Introductory Physics Laboratory Travelling Microscope	1-3	2	1-3	Lecture cum demonstration, Problem solving	Problem solving Experimental assessment

July 17 – 24, 2026 (Day Order 1- 6)	1 and 3	Introductory Mechanics 1.2 Wave motion – types of waves- Transverse and longitudinal wave motion	1-3	2	1-3	Lecture cum demonstration, Problem solving	IIIrd Component – I, K2 and K3 Level (15 Marks) problem test Unit 1
July 25 – 28, 2026 (Day Order 1- 3)	3	Introductory Physics Laboratory Spectrometer	1-3	1	1-3	Practical demonstration and hands on training	Experimental assessment
July 29 – Aug 3, 2026	C.A. Test - I						
Aug 4 - 6, 2026 (Day Order 4 - 6)	1 and 3	Introductory Mechanics wave front – wavelength – frequency – wave number- displacement – velocity Introductory Physics Laboratory Deflection Magnetometer	1-3	1	1-3	Lecture cum demonstration, Problem solving	Quiz on the content taught Experimental assessment
Aug 7 – 14, 2026 (Day Order 1- 6)	2 and 3	Electronics 2.1 Energy bands in solids- conductors- insulators-	1-3	2	1-3	Lecture cum demonstration	Quiz on the content taught

		semiconductors Introductory Physics Laboratory Tangent Galvanometer					Experimental assessment
Aug 17 - 24, 2026 (Day Order 1- 6)	2 and 3	Electronics types of semiconductors – Intrinsic – extrinsic Introductory Physics Laboratory Colour codes of resistors	1-3	2	1-3	Lecture cum demonstration	Quiz on the content taught Experimental assessment
Aug 25 – Sep 2, 2026 (Day Order 1- 6)	2 and 3	Electronics P type – N type – PN junction – diode Introductory Physics Laboratory usage of bread board	1-3	2	1-3	Lecture cum demonstration	Quiz on the content taught Experimental assessment
Sep 3 – 11, 2026 (Day Order 1- 6)	2	Electronics transistor – Bipolar Junction Transistor	1-3	2	1-3	Lecture	IIIrd Component – II, K1 and K2 Level (15 Marks) Theory

							Unit 2
Sep 15-17, 2026 (Day Order 1 - 3)	2	Electronics 2.2 Basic Logic gates	1-3	1	1-3	Lecture	
Sep 18 –23, 2026	C.A. Test - II						
Sep 24 - 28, 2026 (Day 4 – 6)	2	Electronics NAND as Universal gate	1-3	1	1-3	Lecture	IIIrd Component – II, K1 and K2 Level (20 Marks) Demonstratio n of experiment Unit 3
Sep 29 – Oct 7, 2026 (Day Order 1 - 6)	2	Electronics NOR as Universal gate	1-3	2	1-3	Lecture	Quiz on the content taught
Oct 8 - 14, 2026 (Day Order 1 - 6)	3	Introductory Physics Laboratory Cathode ray Oscilloscope	1-3	2	1-3	Lecture cum demonstration	Experimental assessment

Oct 15 - 21, 2026 (Day Order 1- 4)	REVISION
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