

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

Department : PHYSICS
Name/s of the Faculty : Dr. ANNIE VINOSHA. P
Course Title : PHYSICS FOR CHEMISTRY I
Course Code : 25PH/ME/PC32
Shift : I

COURSE OUTCOMES (COs)

COs	Description					CL	
CO1	recall the basic ideas of physical properties of different states of matter, motion of a rigid body, relativity, and wave nature of light.					1	
CO2	understand the elastic nature of solids, surface tension, viscosity of liquids, oscillation of a rigid body, constant nature of velocity of light in free space, and physical optics.					2	
CO3	apply the knowledge obtained to determine the bending moment, modulus of elasticity, coefficient of viscosity, surface tension, period of oscillation, transformation equation and wavelength.					3	
CO4	study the distinguishing characteristics of solid, liquid and light.					4	
CO5	impart analytical skills to solve problems related to properties of matter, liquids, relativity and wave nature of light.					5	
Week	Unit No.	Content	Cognitive Level	Teaching Hours	COs	Teaching Learning Methodology	Assessment Methods

Jun 15 – 22, 2026 (Day Order 1- 6)	1	Properties of Matter 1.1 Elasticity: Moduli of elasticity – Poisson’s ratio- Young’s modulus – Bending of beams - Expression for bending moment	1-5	3	1-5	Lecture	Problem-solving
Jun 23 – July 1, 2026 (Day Order 1- 6)	1	1.1 Depression and elevation at the mid-point of a loaded beam - Torsion in a wire – Torsional oscillations – Torque per unit twist- Expression for period.	1-5	3	1-5	Lecture	Problem-solving
July 2 – July 8, 2026 (Day Order 1- 6)	2	Surface Tension and Viscosity 2.1 Introduction - Experimental determination of surface tension and interfacial surface tension by drop weight method – Variation of surface tension with temperature	1-5	3	1-5	Lecture	Problem-solving
July 9 – 16, 2026 (Day Order 1- 6)	2	2.2 Viscosity - Streamline and turbulent	1-5	3	1-5	Lecture cum demonstration,	Quiz on the content

Aug 4 - 6, 2026 (Day Order 4 - 6)	3 & 4	3.1 Centre of suspension and Centre of oscillation Relativity 4.1 Newton's laws of motion and its limitations	1-5	2	1-5	Lecture cum demonstration, Problem solving	Quiz on the content taught and problem sheet
Aug 7 – 14, 2026 (Day Order 1- 6)	4	4.1 Inertial frames of reference – Newtonian relativity – Galilean transformation equations.	1-5	3	1-5	Lecture cum demonstration, Problem solving	Working model K5 Level (10 marks)
Aug 17 - 24, 2026 (Day Order 1- 6)	4	4.2 Postulates of special theory of relativity 4.2 Lorentz transformation equations - Length contraction	1-5	3	1-5	Lecture cum demonstration, Problem solving	Quiz on the content taught and problem sheet
Aug 25 – Sep 2, 2026 (Day Order 1- 6)	4	4.2 Time dilation - Twin paradox and Meson paradox	1-5	3	1-5	Lecture cum demonstration, Problem solving	Quiz on the content taught and problem sheet
Sep 3 – 11, 2026 (Day Order 1- 6)	4 & 5	4.3 Relativistic Momentum (no derivation) - Mass-	1-5	3	1-5	Lecture cum demonstration, Problem solving	Group discussion and problem

