

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

Department : Physics
Name/s of the Faculty : Ms. Christy Preetha. A and Dr. D. Anceila
Course Title : Experimental Physics I
Course Code : 25PH/MC/P113
Shift : I

COURSE OUTCOMES (COs)

COs	Description	CL
CO1	recall and relate the theoretical concepts of the experiments.	K1
CO2	explain understand the experimental procedure.	K2
CO3	apply the theoretical knowledge of physics experiments to obtain the necessary data.	K3
CO4	analyse and interpret the quantitative results utilizing mathematical and graphical verification.	K4
CO5	develop analytic ability from the technical knowledge gained through hands on training.	K5

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 (Day Order 1- 6)	Expts no: 1-8 Each	1. Young's Modulus - Non – uniform bending (Pin and Microscope)	K1-K5	3	1-5	Hands-on teaching	Accuracy of the result

	group will do one experiment per week as per the given order.	2. Calibration of Voltmeter (Low Range)- Potentiometer 3. Young's Modulus - Uniform Bending (Scale and Telescope) 4. Surface Tension and Interfacial Surface Tension - Drop Weight Method. 5. Rigidity Modulus using Torsion Pendulum (Dynamic torsion method) 6. Determination of the Refractive Index of the Material of Solid and Liquid Prism – Spectrometer 7. Figure of Merit - Ballistic Galvanometer. 8. Determination of radius of curvature and focal length of the lens - Newton's Rings					
July 2 – July 8, 2026 (Day Order 1- 6)	Expts no: 1-8 Each group will do one experiment	1. Young's Modulus - Non – uniform bending (Pin and Microscope) 2. Calibration of Voltmeter (Low Range)- Potentiometer	K1-K5	3	1-5	Hands-on teaching	Accuracy of the result

	t per week as per the given order.	3. Young's Modulus - Uniform Bending (Scale and Telescope) 4. Surface Tension and Interfacial Surface Tension - Drop Weight Method. 5. Rigidity Modulus using Torsion Pendulum (Dynamic torsion method) 6. Determination of the Refractive Index of the Material of Solid and Liquid Prism – Spectrometer 7. Figure of Merit - Ballistic Galvanometer. 8. Determination of radius of curvature and focal length of the lens - Newton's Rings					
July 9 – 16, 2026 (Day Order 1- 6)	Expts no: 1-8 Each group will do one experimen t per week as per the given	1. Young's Modulus - Non – uniform bending (Pin and Microscope) 2. Calibration of Voltmeter (Low Range)- Potentiometer 3. Young's Modulus - Uniform Bending (Scale and Telescope)	K1-K5	3	1-5	Hands-on teaching	Accuracy of the result

	order.	4. Surface Tension and Interfacial Surface Tension - Drop Weight Method. 5. Rigidity Modulus using Torsion Pendulum (Dynamic torsion method) 6. Determination of the Refractive Index of the Material of Solid and Liquid Prism – Spectrometer 7. Figure of Merit - Ballistic Galvanometer. 8. Determination of radius of curvature and focal length of the lens - Newton's Rings					
July 17 – 24, 2026 (Day Order 1- 6)	Expts no: 1-8 Each group will do one experiment per week as per the given order.	1. Young's Modulus - Non – uniform bending (Pin and Microscope) 2. Calibration of Voltmeter (Low Range)- Potentiometer 3. Young's Modulus - Uniform Bending (Scale and Telescope) 4. Surface Tension and Interfacial Surface Tension - Drop Weight	K1-K5	3	1-5	Hands-on teaching	Accuracy of the result

		Method. 5. Rigidity Modulus using Torsion Pendulum (Dynamic torsion method) 6. Determination of the Refractive Index of the Material of Solid and Liquid Prism – Spectrometer 7. Figure of Merit - Ballistic Galvanometer. 8. Determination of radius of curvature and focal length of the lens - Newton's Rings					
July 25 – 28, 2026 (Day Order 1- 3)	Expts no: 1-8 Each group will do one experiment per week as per the given order.	1. Young's Modulus - Non – uniform bending (Pin and Microscope) 2. Calibration of Voltmeter (Low Range)- Potentiometer 3. Young's Modulus - Uniform Bending (Scale and Telescope) 4. Surface Tension and Interfacial Surface Tension - Drop Weight Method. 5. Rigidity Modulus using Torsion Pendulum	K1-K5	3	1-5	Hands-on teaching	Accuracy of the result

		(Dynamic torsion method) 6. Determination of the Refractive Index of the Material of Solid and Liquid Prism – Spectrometer 7. Figure of Merit - Ballistic Galvanometer. 8. Determination of radius of curvature and focal length of the lens - Newton's Rings					
July 29 – Aug 3, 2026	C.A. Test - I						
Aug 4 - 6, 2026 (Day Order 4 - 6)	-	-	-	-	-	-	-
Aug 7 – 14, 2026 (Day Order 1- 6)	Expts no: 1-8 Each group will do one experiment per week as per the given order.	1. Young's Modulus - Non – uniform bending (Pin and Microscope) 2. Calibration of Voltmeter (Low Range)- Potentiometer 3. Young's Modulus - Uniform Bending (Scale and Telescope) 4. Surface Tension and Interfacial Surface Tension - Drop Weight Method.	K1-K5	3	1-5	Hands-on teaching	Accuracy of the result

		5. Rigidity Modulus using Torsion Pendulum (Dynamic torsion method) 6. Determination of the Refractive Index of the Material of Solid and Liquid Prism – Spectrometer 7. Figure of Merit - Ballistic Galvanometer. 8. Determination of radius of curvature and focal length of the lens - Newton's Rings					
Aug 17 - 24, 2026 (Day Order 1- 6)	Expts no: 1-8 Each group will do one experiment per week as per the given order.	1. Young's Modulus - Non – uniform bending (Pin and Microscope) 2. Calibration of Voltmeter (Low Range)- Potentiometer 3. Young's Modulus - Uniform Bending (Scale and Telescope) 4. Surface Tension and Interfacial Surface Tension - Drop Weight Method. 5. Rigidity Modulus using Torsion Pendulum (Dynamic torsion	K1-K5	3	1-5	Hands-on teaching	Accuracy of the result

		method) 6. Determination of the Refractive Index of the Material of Solid and Liquid Prism – Spectrometer 7. Figure of Merit - Ballistic Galvanometer. 8. Determination of radius of curvature and focal length of the lens - Newton's Rings					
Aug 25 – Sep 2, 2026 (Day Order 1- 6)	Expts no: 1-8 Each group will do one experiment per week as per the given order.	1. Young's Modulus - Non – uniform bending (Pin and Microscope) 2. Calibration of Voltmeter (Low Range)- Potentiometer 3. Young's Modulus - Uniform Bending (Scale and Telescope) 4. Surface Tension and Interfacial Surface Tension - Drop Weight Method. 5. Rigidity Modulus using Torsion Pendulum (Dynamic torsion method) 6. Determination of the Refractive Index of the	K1-K5	3	1-5	Hands-on teaching	Accuracy of the result

		Material of Solid and Liquid Prism – Spectrometer 7. Figure of Merit - Ballistic Galvanometer. 8. Determination of radius of curvature and focal length of the lens - Newton's Rings					
Sep 3 – 11, 2026 (Day Order 1- 6)	Expts no: 1-8 Practice and Revision	1. Young's Modulus - Non – uniform bending (Pin and Microscope) 2. Calibration of Voltmeter (Low Range)- Potentiometer 3. Young's Modulus - Uniform Bending (Scale and Telescope) 4. Surface Tension and Interfacial Surface Tension - Drop Weight Method. 5. Rigidity Modulus using Torsion Pendulum (Dynamic torsion method) 6. Determination of the Refractive Index of the Material of Solid and Liquid Prism – Spectrometer	K1-K5	3	1-5	Hands-on teaching	Accuracy of the result

		7. Figure of Merit - Ballistic Galvanometer. 8. Determination of radius of curvature and focal length of the lens - Newton's Rings					
Sep 15-17, 2026 (Day Order 1 - 3)	Expts 1-8 Practice and Revision	1. Young's Modulus - Non – uniform bending (Pin and Microscope) 2. Calibration of Voltmeter (Low Range)- Potentiometer 3. Young's Modulus - Uniform Bending (Scale and Telescope) 4. Surface Tension and Interfacial Surface Tension - Drop Weight Method. 5. Rigidity Modulus using Torsion Pendulum (Dynamic torsion method) 6. Determination of the Refractive Index of the Material of Solid and Liquid Prism – Spectrometer 7. Figure of Merit - Ballistic Galvanometer. 8. Determination of	K1-K5	3	1-5	Hands-on teaching	Accuracy of the result

		radius of curvature and focal length of the lens - Newton's Rings					
Sep 18 –23, 2026	C.A. Test - II						
Sep 24 - 28, 2026 (Day 4 – 6)	-	-	-	-	-	-	-
Sep 29 – Oct 7, 2026 (Day Order 1 - 6)	1 out of the 8 experiments will be given to each student for the assessment	1. Young's Modulus - Non – uniform bending (Pin and Microscope) 2. Calibration of Voltmeter (Low Range)- Potentiometer 3. Young's Modulus - Uniform Bending (Scale and Telescope) 4. Surface Tension and Interfacial Surface Tension - Drop Weight Method. 5. Rigidity Modulus using Torsion Pendulum (Dynamic torsion method) 6. Determination of the Refractive Index of the Material of Solid and Liquid Prism – Spectrometer 7. Figure of Merit -	K1-K5	3	1-5	PRACTICALS CA Test I – 50 marks K1 – K5 Level	Aim, Formula – K1 level for 10 marks Experimental Procedure - K2 level for 10 marks Observation – K3 level for 10 marks Calculation and results – K4 level for 10 marks Record – K5 level for 10 marks

		Ballistic Galvanometer. 8. Determination of radius of curvature and focal length of the lens - Newton's Rings					
Oct 8 - 14, 2026 (Day Order 1 - 6)	1 out of the 8 experiments will be given to each student for the assessment	1. Young's Modulus - Non – uniform bending (Pin and Microscope) 2. Calibration of Voltmeter (Low Range)- Potentiometer 3. Young's Modulus - Uniform Bending (Scale and Telescope) 4. Surface Tension and Interfacial Surface Tension - Drop Weight Method. 5. Rigidity Modulus using Torsion Pendulum (Dynamic torsion method) 6. Determination of the Refractive Index of the Material of Solid and Liquid Prism – Spectrometer 7. Figure of Merit - Ballistic Galvanometer. 8. Determination of radius of curvature and	K1-K5	3	1-5	PRACTICALS CA Test II – 50 marks K1 – K5 Level	Aim, Formula – K1 level for 10 marks Experimental Procedure - K2 level for 10 marks Observation – K3 level for 10 marks Calculation and results – K4 level for 10 marks Record – K5 level for 10 marks

		focal length of the lens - Newton's Rings					
Oct 15 - 21, 2026 (Day Order 1- 4)	REVISION						