

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

Department : PHYSICS
Name/s of the Faculty : Ms. CHRISTY PREETHA and Ms. PANIMAYA PESHUJA. A
Course Title : EXPERIMENTAL PHYSICS III
Course Code : 25PH/MC/P332
Shift : I

COURSE OUTCOMES (COs)

COs	Description						CL
CO1	recall and relate the theoretical concepts of the experiments.						K1
CO2	explain 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 15 – 22, 2026 (Day Order 1- 6)	1 – 8 Each group will do one experiment per week as per the given order.	1.Determination of the Frequency of the Tuning Fork using – Transverse and Longitudinal Mode of Vibrations of the String - Melde's Apparatus 2. Determination of Absolute Capacity of a Condenser - Ballistic Galvanometer 3. Determination of Resistance and Specific Resistance - Potentiometer 4. Dispersive Power of the Prism and Cauchy's Constants - Spectrometer 5. Determination of radius of curvature of lens - Newton's Rings 6. Verification of perpendicular axes theorem - Bifilar Pendulum 7. Absolute Determination and	1-5	2	1-5	Hands-on teaching	Accuracy of the result
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		Comparison of Coefficient of Viscosities of Liquids 8. Determination of H and B - Field along the axis of the Coil					
Jun 23 – July 1, 2026 (Day Order 1- 6)	1 – 8 Each group will do one experiment per week as per the given order.	1.Determination of the Frequency of the Tuning Fork using – Transverse and Longitudinal Mode of Vibrations of the String - Melde's Apparatus 2. Determination of Absolute Capacity of a Condenser - Ballistic Galvanometer 3. Determination of Resistance and Specific Resistance - Potentiometer 4. Dispersive Power of the Prism and Cauchy's Constants - Spectrometer 5. Determination of radius of curvature of lens - Newton's	1-5	2	1-5	Hands-on teaching	Accuracy of the result

		Rings 6. Verification of perpendicular axes theorem - Bifilar Pendulum 7. Absolute Determination and Comparison of Coefficient of Viscosities of Liquids 8. Determination of H and B - Field along the axis of the Coil					
July 2 – July 8, 2026 (Day Order 1- 6)	1 – 8 Each group will do one experiment per week as per the given order.	1.Determination of the Frequency of the Tuning Fork using – Transverse and Longitudinal Mode of Vibrations of the String - Melde's Apparatus 2. Determination of Absolute Capacity of a Condenser - Ballistic Galvanometer 3. Determination of Resistance and Specific Resistance - Potentiometer	1-5	2	1-5	Hands-on teaching	Accuracy of the result

		4. Dispersive Power of the Prism and Cauchy's Constants - Spectrometer 5. Determination of radius of curvature of lens - Newton's Rings 6. Verification of perpendicular axes theorem - Bifilar Pendulum 7. Absolute Determination and Comparison of Coefficient of Viscosities of Liquids 8. Determination of H and B - Field along the axis of the Coil					
July 9 – 16, 2026 (Day Order 1- 6)	1 – 8 Each group will do one experiment per week as per the given order.	1.Determination of the Frequency of the Tuning Fork using – Transverse and Longitudinal Mode of Vibrations of the String - Melde's Apparatus	1-5	2	1-5	Hands-on teaching	Accuracy of the result

		2. Determination of Absolute Capacity of a Condenser - Ballistic Galvanometer 3. Determination of Resistance and Specific Resistance - Potentiometer 4. Dispersive Power of the Prism and Cauchy's Constants - Spectrometer 5. Determination of radius of curvature of lens - Newton's Rings 6. Verification of perpendicular axes theorem - Bifilar Pendulum 7. Absolute Determination and Comparison of Coefficient of Viscosities of Liquids 8. Determination of H and B - Field along the axis of the Coil					
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July 17 – 24, 2026 (Day Order 1- 6)	1 – 8 Each group will do one experiment per week as per the given order.	1.Determination of the Frequency of the Tuning Fork using – Transverse and Longitudinal Mode of Vibrations of the String - Melde's Apparatus 2. Determination of Absolute Capacity of a Condenser - Ballistic Galvanometer 3. Determination of Resistance and Specific Resistance - Potentiometer 4. Dispersive Power of the Prism and Cauchy's Constants - Spectrometer 5. Determination of radius of curvature of lens - Newton's Rings 6. Verification of perpendicular axes theorem - Bifilar Pendulum 7. Absolute Determination and	1-5	2	1-5	Hands-on teaching	Accuracy of the result
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		Comparison of Coefficient of Viscosities of Liquids 8. Determination of H and B - Field along the axis of the Coil					
July 25 – 28, 2026 (Day Order 1- 3)							
July 29 – Aug 3, 2026	C.A. Test - I						
Aug 4 - 6, 2026 (Day Order 4 - 6)	1 – 8 Each group will do one experiment per week as per the given order.	1.Determination of the Frequency of the Tuning Fork using – Transverse and Longitudinal Mode of Vibrations of the String - Melde's Apparatus 2. Determination of Absolute Capacity of a Condenser - Ballistic Galvanometer 3. Determination of Resistance and Specific Resistance - Potentiometer 4. Dispersive Power of the Prism and Cauchy's Constants -	1-5	2	1-5	Hands-on teaching	Accuracy of the result

		Spectrometer 5. Determination of radius of curvature of lens - Newton's Rings 6. Verification of perpendicular axes theorem - Bifilar Pendulum 7. Absolute Determination and Comparison of Coefficient of Viscosities of Liquids 8. Determination of H and B - Field along the axis of the Coil					
Aug 7 – 14, 2026 (Day Order 1- 6)	1 – 8 Each group will do one experiment per week as per the given order.	1.Determination of the Frequency of the Tuning Fork using – Transverse and Longitudinal Mode of Vibrations of the String - Melde's Apparatus 2. Determination of Absolute Capacity of a Condenser - Ballistic Galvanometer	1-5	2	1-5	Hands-on teaching	Accuracy of the result

		3. Determination of Resistance and Specific Resistance - Potentiometer 4. Dispersive Power of the Prism and Cauchy's Constants - Spectrometer 5. Determination of radius of curvature of lens - Newton's Rings 6. Verification of perpendicular axes theorem - Bifilar Pendulum 7. Absolute Determination and Comparison of Coefficient of Viscosities of Liquids 8. Determination of H and B - Field along the axis of the Coil					
Aug 17 - 24, 2026 (Day Order 1- 6)	1 – 8 Each group will do one experiment per week	1.Determination of the Frequency of the Tuning Fork using – Transverse and Longitudinal Mode of Vibrations of the	1-5	2	1-5	Hands-on teaching	Accuracy of the result

	as per the given order.	String - Melde's Apparatus 2. Determination of Absolute Capacity of a Condenser - Ballistic Galvanometer 3. Determination of Resistance and Specific Resistance - Potentiometer 4. Dispersive Power of the Prism and Cauchy's Constants - Spectrometer 5. Determination of radius of curvature of lens - Newton's Rings 6. Verification of perpendicular axes theorem - Bifilar Pendulum 7. Absolute Determination and Comparison of Coefficient of Viscosities of Liquids 8. Determination of H and B - Field along the axis of the Coil					
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Aug 25 – Sep 2, 2026 (Day Order 1- 6)	1-8 Repetition and Revision	1.Determination of the Frequency of the Tuning Fork using – Transverse and Longitudinal Mode of Vibrations of the String - Melde's Apparatus 2. Determination of Absolute Capacity of a Condenser - Ballistic Galvanometer 3. Determination of Resistance and Specific Resistance - Potentiometer 4. Dispersive Power of the Prism and Cauchy's Constants - Spectrometer 5. Determination of radius of curvature of lens - Newton's Rings 6. Verification of perpendicular axes theorem - Bifilar Pendulum 7. Absolute Determination and	1-5	2	1-5	Hands-on teaching	Accuracy of the result
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		Comparison of Coefficient of Viscosities of Liquids 8. Determination of H and B - Field along the axis of the Coil					
Sep 3 – 11, 2026 (Day Order 1- 6)	1 out of the 8 experiments will be given to each student for the assessment	1.Determination of the Frequency of the Tuning Fork using – Transverse and Longitudinal Mode of Vibrations of the String - Melde's Apparatus 2. Determination of Absolute Capacity of a Condenser - Ballistic Galvanometer 3. Determination of Resistance and Specific Resistance - Potentiometer 4. Dispersive Power of the Prism and Cauchy's Constants - Spectrometer 5. Determination of radius of curvature of lens - Newton's Rings	1-5	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

		6. Verification of perpendicular axes theorem - Bifilar Pendulum 7. Absolute Determination and Comparison of Coefficient of Viscosities of Liquids 8. Determination of H and B - Field along the axis of the Coil					
Sep 15-17, 2026 (Day Order 1 - 3)							
Sep 18 –23, 2026	C.A. Test - II						
Sep 24 - 28, 2026 (Day 4 – 6)	1 out of the 8 experiments will be given to each student for the assessment	1.Determination of the Frequency of the Tuning Fork using – Transverse and Longitudinal Mode of Vibrations of the String - Melde's Apparatus 2. Determination of Absolute Capacity of a Condenser - Ballistic Galvanometer	1-5	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

		3. Determination of Resistance and Specific Resistance - Potentiometer 4. Dispersive Power of the Prism and Cauchy's Constants - Spectrometer 5. Determination of radius of curvature of lens - Newton's Rings 6. Verification of perpendicular axes theorem - Bifilar Pendulum 7. Absolute Determination and Comparison of Coefficient of Viscosities of Liquids 8. Determination of H and B - Field along the axis of the Coil					Calculation and results – K4 level for 10 marks Record – K5 level for 10 marks
Sep 29 – Oct 7, 2026 (Day Order 1 - 6)	1-8 Repetition and Revision	1.Determination of the Frequency of the Tuning Fork using – Transverse and Longitudinal Mode of Vibrations of the	1-5	2	1-5	Hands-on teaching	Accuracy of the result

		String - Melde's Apparatus 2. Determination of Absolute Capacity of a Condenser - Ballistic Galvanometer 3. Determination of Resistance and Specific Resistance - Potentiometer 4. Dispersive Power of the Prism and Cauchy's Constants - Spectrometer 5. Determination of radius of curvature of lens - Newton's Rings 6. Verification of perpendicular axes theorem - Bifilar Pendulum 7. Absolute Determination and Comparison of Coefficient of Viscosities of Liquids 8. Determination of H and B - Field along the axis of the Coil					
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Oct 8 - 14, 2026 (Day Order 1 - 6)	1-8 Repetition and Revision	1.1.Determination of the Frequency of the Tuning Fork using – Transverse and Longitudinal Mode of Vibrations of the String - Melde's Apparatus 2. Determination of Absolute Capacity of a Condenser - Ballistic Galvanometer 3. Determination of Resistance and Specific Resistance - Potentiometer 4. Dispersive Power of the Prism and Cauchy's Constants - Spectrometer 5. Determination of radius of curvature of lens - Newton's Rings 6. Verification of perpendicular axes theorem - Bifilar Pendulum 7. Absolute Determination and	1-5	2	1-5	Hands-on teaching	Accuracy of the result
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		Comparison of Coefficient of Viscosities of Liquids 8. Determination of H and B - Field along the axis of the Coil					
Oct 15 - 21, 2026 (Day Order 1- 4)	REVISION						