

MARTHANDAM COLLEGE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF SCIENCE AND HUMANITIES

PHYSICS LAB

Equipments Available in the Lab

Sl.No	Hardware	Specification
1.	Travelling microscope	EIFO Travelling Microscope
2.	Torsional pendulum	SHE Torsion pendulum
3	Spectrometer	EIFO Spectrometer 7” crossline all Brass one
4	Mercury Vapour Lamp	HPL-N 125 watts philips
5	Sodium Vapour Lamp	GBL watts philips
6	Newton’s rings experiment	Pow Newton’s ring apparatus
7	Grating 2400 lines/inch	PIC Gratings 2400 lines/inch
8	Laser Source	PICO 670 Nm LS001 Laser source
9	Post Office Box	PICO Maganin resistors 1/-180 post office box
10	Resistance Box	PICO Four dial TK-15613 -0.1,1,10&100 Ohms resistance box
11	Galvanometer	ELFO 30-0-30-MO-65 One Galvanometer
12	Fibre optics	PICO FOT-1 Fibre optics
13	Ultrasonic Interferometer (Analog)	PIC-Ultrasonic Interferometer Model NO BL-02
14	Ultrasonic Interferometer (Digital)	Ultrasonic Interferometer Model No. TUIT-100

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COURSES OFFERED

Sl.No	Odd Sem (Course code & Name)	Class	Even Sem (Course code & Name)	Class
1	BS3171 – Physics Chemistry Lab	1 Semester All Branches		

BS3171-Physics Chemistry Laboratory

OBJECTIVES (Physics Lab):

- To learn the proper use of various kinds of physics laboratory equipment
- To learn how data can be collected, presented and interpreted in a clear and concise manner
- To learn problem solving skills related to physics principles and interpretation of experimental data.
- To determine error in experimental measurements and techniques used to minimise such error.
- To make the student an active participant in each part of all lab experiments.

OUTCOMES:

- Upon completion of the course, the students should be able to
- Understand the functioning of various physics laboratory equipment.
- Use graphical models to analyse laboratory data.
- Use mathematical models as a medium for quantitative reasoning and describing physical reality.
- Access, process and analyze scientific information.
- Solve problems individually and collaboratively.

LIST OF EXPERIMENTS

1. Torsional pendulum - Determination of rigidity modulus of wire and moment of inertia of regular and irregular objects.
2. Simple harmonic oscillations of cantilever.
3. Non-uniform bending - Determination of Young's modulus

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4. Uniform bending – Determination of Young's modulus
5. Laser- Determination of the wave length of the laser using grating
6. Air wedge - Determination of thickness of a thin sheet
7. Ultrasonic interferometer – determination of the velocity of sound and compressibility of liquid