



I Year-I Semester		L	T	P	C
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ENGINEERING PHYSICS LAB (BS1109)					

Prerequisite Course: Fundamental Concepts of Physics Lab

Course Objectives: Training field oriented Engineering graduates to handle instruments and their design methods to improve the accuracy of measurements.

Course Outcomes:

Upon completion of the course, the student will be able to achieve the following outcomes.

Cos	Course Outcomes	POs
1	Fundamental understanding of design of an instrument with targeted accuracy for physical measurements.	2
2	Investigate the properties of Thin Films and Light sources.	2
3	Analyse the Elastic nature of materials.	2
4	Understand the phenomenon of Resonance and its effects in Electronic Circuits.	2
5	Gain the Knowledge of electrical properties of Semiconductors	2
6	Identify the magnetic field behaviour.	2

Syllabus:

LIST OF EXPERIMENTS:

1. Determination of Rigidity modulus of a material- Torsional Pendulum.
2. Determination of Young's modulus by method of single cantilever oscillations.
3. Determination of Acceleration due to Gravity and Radius of Gyration - Compound Pendulum.
4. Verification of laws of vibrations in stretched strings – Sonometer.
5. Determination of spring constant of springs using coupled oscillators.
6. Magnetic field along the axis of a current carrying coil – Stewart and Gee's apparatus
7. Study the variation of B versus H by magnetizing the magnetic material (B-H curve).
8. Measurement of magnetic susceptibility by Gouy's method.
9. Determination of ultrasonic velocity in liquid (Acoustic Grating)
10. Determination of dielectric constant by charging and discharging method
11. Determination of wavelength of Laser by diffraction grating
12. Determination of particle size using Laser.
13. Determination of Pressure variation using strain Gauge sensor.
14. Determination of Moment of Inertia of a Fly Wheel.
15. Determination of Velocity of sound –Volume Resoantor.

REFERENCE BOOKS:

1. Applied/Engineering Physics Lab Manual by C.V.Madhusudhan Rao & V.Vasanth Kumar, Scitech publications.
2. Applied/ Engineering Physics Lab Manual by M.Sri Ramarao, Mityanand Choudary & Daruka Prasad, Acme Learning Private Limited.
3. Applied/Engineering physics Lab Manual by Dr. Y.APARNA & Dr. K.VENKATESWARARAO, VGS TECHNO SERIES.