I Year-II Semester		**L**	**T**	**P**	**C**
		0	**0**	**3**	**2**

ENGINEERING PHYSICS LAB (R13214)

Prerequisite Course: practical knowledge of basic physics experiments.

Course Description and Objectives: Apply the concepts of physics in operating the modern devices.

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 wavelength of a source-Diffraction Grating- Normal incidence
2. Newton's rings –Radius of Curvature of Plano-Convex Lens.
3. Determination of thickness of a thin object using parallel interference fringes.
4. Determination of Rigidity modulus of a material- Torsional Pendulum.
5. Determination of Acceleration due to Gravity and Radius of Gyration- Compound Pendulum.
6. Melde's experiment – Transverse and Longitudinal modes.
7. Verification of laws of stretched string – Sonometer.
8. Determination of velocity of sound – Volume resonator.
9. L C R Series Resonance Circuit
10. Study of I/V Characteristics of Semiconductor diode
11. I/V characteristics of Zener diode
12. Thermistor characteristics – Temperature Coefficient
13. Magnetic field along the axis of a current carrying coil – Stewart and Gee's apparatus.
14. Energy Band gap of a Semiconductor p-n junction.
15. Hall Effect for semiconductor.

REFERENCE:

1. Engineering Physics Lab Manual by Dr. Y. Aparna & Dr. K.Venkateswarao V.G.S.Booklinks .
2. Physics practical manual, Lorven Publications.