

## **PHY119:ENGINEERING PHYSICS LABORATORY**

**Course Outcomes:** Through this course students should be able to

CO1 :: associate practical knowledge with the theoretical studies.

CO2 :: demonstrate basic experimental techniques required to find fundamental parameters in physics.

CO3 :: develop good experimental skills, including proper setup, care of equipment, conducting experiments and analyzing results in order to observe physical phenomena.

### **List of Practicals / Experiments:**

#### **Engineering Physics Practicals**

- To find the wavelength of sodium light by measuring the diameter of Newton rings.
- To investigate the intensity of light coming through two crossed polaroids and to verify the Malus law.
- To determine Hall voltage and Hall coefficient using Hall effect and also find carrier concentration of the crystal used.
- To determine the dielectric constant of solid by resonance method.
- To find out the energy band gap of semiconductor using four probes method.
- To study the variation of magnetic field with the distance along the axis of circular coil carrying current by plotting a graph and also to find the radius of the circular coil.
- To determine the velocity of ultrasonic waves using ultrasonic interferometer and to find the compressibility of the given liquid.
- To find the value of Planck's constant and photoelectric work function of the material of the cathode using a photoelectric cell.
- To plot a graph between current and frequency in series and parallel LCR circuit and to find the resonant frequency, quality factor and bandwidth.
- To find the frequency of AC mains using electric vibrator.

#### **References:**

1. B.SC. PRACTICAL PHYSICS by HARNAM SINGH, DR P.S. HEMNE, S Chand Publishing
2. B.SC. PRACTICAL PHYSICS by C.L. ARORA, S. CHAND & COMPANY