

EC-151**PHYSICS LAB****L T P C**
- - 3 2**COURSE OBJECTIVES:**

1. To familiarize the students with electronic measuring instruments..
2. To measure various parameters of the optical components.
3. Design/problem solving skills, practical experience are developed through laboratory assignments which provide opportunities for developing team in multidisciplinary environments.
4. To understand the general, scientific concepts and a wide idea on various components & instruments required for technology.

COURSE OUTCOMES:**After successful completion of the course, the students will be able to**

1. Describe the use of CRO, signal generator, spectrometer for making measurements.
2. Evaluate the optical components using principles of interference & diffraction.
3. Examine the selectivity parameter in electrical circuits.
4. Function effectively as an individual member to examine and analyze the data.

List of Experiments:

1. Interference fringes - measurement of thickness of a foil using wedge method.
2. Newton's rings - measurement of radius of curvature of Plano - convex lens.
3. Lissajous' figures - calibration of an audio oscillator.
4. Photo cell - characteristic curves and determination of stopping potential.
5. Diffraction grating - measurement of wavelengths.
6. Torsional pendulum - determination of Rigidity modulus of a wire.
7. Photo-Voltaic cell - determination of fill factor.
8. Series LCR resonance circuit - determination of Q factor.
9. Sonometer - determination of A.C. frequency.
10. Laser - determination of single slit diffraction.
11. B - H Curve - Variation of magnetic field along the axis of a circular current carrying coil.
12. Optical Fiber - Determination of Numerical Aperture and Acceptance Angle.

REFERENCE BOOK : Physics Lab Manual , R.V.R. & J.C. CE, Guntur**Note:** A minimum of 10(Ten) experiments have to be performed and recorded by the candidate to attain eligibility for Semester End Practical Examination.