

PHYSICS LABORATORY

Course Code	FE 150/FE250		Credits	1	
Scheme of Instruction Hours/ Week	L	T	P	TOTAL	
	0	0	2	26 hrs/sem	
Scheme of Examination	IA	TW	TM	P	O
TOTAL = 25 marks	0	25	0	0	0

Course Outcomes:

The student will be able to:

CO1	Explain the applications of concepts like Ultrasonics, X- rays, Superconductivity and Lasers in the different fields of daily life
CO2	Experiment using various apparatus like Cathode ray Oscilloscope and CRT tube.
CO3	Analyse the concept of physics like interference, semiconductors, ultrasonics and , Electron Ballistics.
CO4	Design and develop a simple applications of semiconductors and ultrasonics

Minimum 12 Experiments to be performed from the following list.

SN	Experiment
1	Newton's Ring
2	Air Wedge
3	Hall Effect
4	Velocity of Ultrasonic Waves
5	He/Ne/Diode Lasers – Determination of wavelength & particle size
6	Energy Gap of a Semiconductor
7	Planck's Constant by Photocell
8	B-H Curve
9	Thermistor Characteristics
10	Dispersive power of the material of a prism
11	Determination of Optical Absorption Co-efficient of materials using lasers
12	Helmholtz Resonator
13	Determination of dielectric constant of a parallel plate capacitor
14	Photodiode characteristics and power response
15	Frequency of AC mains using Electric Vibrator
16	Estimation of Fermi Energy of Copper
17	Determine the acceptance angle and numerical aperture of an optical fiber
18	Determination of magnetic field constant along the axis of current carrying coil
19	Series and Parallel L-C-R circuit – Inductance, Bandwidth and Quality Factor

TEXTBOOKS

1	M. N. Avadhanulu & P. G. Kshirsagar; A text book of engineering Physics; S. Chand & company Pvt. Ltd. Revised edition 2015.
2	A. S. Vasudeva; Modern Engineering Physics; S. Chand & Company Pvt. Ltd. Revised Edition. 2015