



Engineering Physics Laboratory (PH 102)

SYLLABUS:

Experiment No.	Details	Hours
1	Introduction to Physics experiments, basic concepts.	6
2	Characteristics of solar cell.	3
3	Characteristics of p-n junction diode.	3
4	Determination of Planck's constant using photo-cell.	3
5	Determination of wavelength of sodium light using Newton's rings.	6
6	Determination of wavelength - diffraction grating (normal incidence).	3
7	Drawing of B-H curve of a ferromagnet.	6
8	Determination of energy gap of a semiconductor.	3
9	Study of temperature dependence of dielectric constant of a ferroelectric.	3
10	Determination of numerical aperture (NA) and loss in an optical fiber.	3
11	Determination of width of - single slit diffraction.	3
12	Determination of wavelength of a semiconductor laser.	3
13	Determination of specific rotation of glucose solution using polarimeter.	3

14	Study of Thermistor characteristics.	3
15	CRO - Measurement of amplitude, frequency and phase.	3
16	Hall effect.	3
TOTAL HOURS		57

Text/Reference Books:

T/R	Book Title/Authors/Publication
T1	R.K.Gaur and S L Gupta, Engg.Physics, Dhanpat Rai Publications, 8 th edition, 2001
T2	P.K.Palaniswamy, Applied physics, Scitech Publications
R1	Practical Physics for Engg students by T Radha Krishna.

Course Objectives:

1	Physics lab reinforces the theory with physics lab experiments to stress the fundamental concepts of physics.
2	Optical experiments establish the proof for different optical phenomenon like Interference, Diffraction and Polarization which are discussed in their curriculum.
3	Fiber Optics experiment through light on modern developments in communication and losses in the fiber cables and related physics.
4	To learn about basic electronic components such as p – n diode, thermistor, solar cell, photocell, laser diodes their working and application.
5	To learn about the magnetic, dielectric properties exhibited by different materials.