

PHY F 214 (Ele. Mag. Optics Lab)

Reference Books:

1. Optics by Ajoy Ghatak, 4th Edition, Tata Mcgraw Hill (2009)
2. Introduction to Electrodynamics by D.J. Griffith, Pearson Publ.

References for experiments:

1. Diffraction of light by single slit and double slit:
Ch. 18 of Ref book1: Fraunhofer diffraction (18.2 & 18.6)
2. Gaussian nature of laser beam/beam spot measurement/ divergence measurement
ch. 26 of Ref book1: Lasers: The line shape function (26.7)
3. Determination of numerical aperture of optical fiber/bending loss
chapter 27 of RB1: Optical Fiber basics: 27.4-27.9 & ch3: 3.4: ray paths in parabolic media
4. Determination of refractive index by Brewster angle measurement/Malus law
chapter 22 of RB1: Polarization, & ch 24: reflection & Refraction of EM waves
5. Ultrasonic diffraction
vibrations & waves by A. P. French
6. Current balance
ch5 of Ref Book2: 5.1
7. Verification of Biot-Savart law
ch7 of Ref Book2: 7.1
8. Fresnel biprism
chapter 14 of Ref book1: section14.8
9. Magneto-optic effect
chapter 22 of RB1

