Birla Institute of Technology & Science, Pilani
Hyderabad Campus

FIRST SEMESTER 2021-2022

Course Handout Part II

Date: 20-08-2021

In addition to part-I (General Handout for all courses appended to the time table) this portion gives further specific details regarding the course.

Course No. : *PHY F214*
Course Title : *Electricity, Magnetism and Optics Lab*
Instructor-in-Charge : *Meenakshi Viswanathan*
Instructors : *Meenakshi Viswanathan, Aravinda N. Raghavan, Aiswarya N. M., Hiwase Prajakta Mohanrao*

Scope and Objective of the Course:

The aim of the course is to perform experiments in electromagnetism and optics that provides further clarity to the theories on those topics learnt through core courses. In this process students will learn to estimate errors and fit the data to ascertain the validity of the models.

Learning outcomes

A. Performing each experiment individually, trouble-shooting and collecting precise data.
B. Interpreting results, analyzing data, and estimating errors in measurements.
C. Documenting the results, and writing lab reports.

Lectures and Experimental Notes

Introductory Video lectures will be given for the experiments and notes (Instrument manual) on the experiments will be uploaded on *CANVAS/ Google Classroom* where necessary.

List of Experiments

S.No.	Experiment
1.	Error Analysis and Curve fitting
2.	Magnetic Force on Wires
3.	Magnetic Field of Coils
4.	Electromagnetic Induction
5.	Hysteresis Loop
6.	Single and Double Slit Diffraction
7.	Michelson Interferometer - He Ne laser
8.	Michelson Interferometer – Na lamp

9.	Malus Law, Quarter and Half wave plates
10.	Fabrication of DC motor contest

Evaluation Scheme:

Component	Duration	Weightage (%)	Date & Time	Nature of Component
Original lab report in the prescribed format, and attendance		40	Every Session, Every experiment within the announced deadline	Open Book
Quiz	variable	40	Second session of each experiment	Closed Book
Group Discussion		20	First session of each experiment	Open Book

Chamber Consultation Hour: To be announced in class.

Notices: All notices concerning this course will be displayed in CANVAS / Google Classroom

Make-up Policy: It is applicable to the following case and it is permissible on production of evidential documents.

Debilitating illness.

Academic honesty and integrity policy: Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

INSTRUCTORS
PHY F214