1.	Title of the course	Physics Laboratory I
2.	Course number	PH508P
3.	Structure of credits	0-0-3-2
4.	Offered to	PG
5.	New course/modification to	Modification To PH5191/10
6.	To be offered by	Department of Physics
7.	To take effect from	July 2022
8.	Prerequisite	Nil
9.	**Course Objective(s):** To introduce students with basic concepts, methods and measurements of different physical quantities in Classical Mechanics, Electromagnetism, Optics and Modern Physics, with an emphasis on developing experimental skills and data analysis. To train students in maintaining efficient laboratory records, improving accuracy in calculations, and scientific report writing.	
10.	**Course Content:** Determination of the characteristic frequencies of the coupled pendulum; Estimation of charge of an electron using Millikan oil drop experiment; To understand atomic systems with discrete energy levels by Franck-Hertz experiment; Determination of the viscosity of fluids using viscometer; Zeeman effect; Confocal Fabry-Perot interferometer; Determination of Verdent constant using Faraday effect; Vibrational spectroscopy of N2 molecule; Single slit diffraction.	
11.	**Textbook(s):** 1. Melissinos C A and Napolitano J, *Experiments in Modern Physics*, Elsevier (2003). 2. Preston W D and Dietz R E, *The Art of Experimental Physics*, John Wiley & Sons (1991).	
12.	**Reference(s):** 1. Beiser A, *Concepts of Modern Physics*, McGraw-Hill Education (2015). 2. Bevington R P and Robinson K D, *Data Reduction and Error Analysis for the Physical Sciences*, McGraw-Hill Education (2015). 3. Lyons L, *A Practical Guide to Data Analysis for Physical Science Students*, Cambridge University Press (2012). 4. Taylor R J, *An Introduction to Error Analysis: The Study of Uncertainties in Physical Measurements*, University Science Books (1997).	