Semester	AUG 2022
Open to semester	
Course code	**PH4144**
Course title	
Credits	/
Course Coordinator & participating faculty (if any)	
Nature of Course	Lab
Pre-requisites	Basic quantum physics and electrodynamics, and some ideas of statistical physics would be helpful.
Objectives (goals, type of students for whom useful, outcome etc)	This lab course offers some interesting experiments based on the concepts that a student frequently comes across during the lecture courses in physics. The experiments are designed to illustrate physics of the electromagnetic radiations, their propagation, and their interaction with matter. The experiments are aimed to illustrate the quantum nature of interactions at the subatomic scales. The course will be useful for Physics students. As for the outcome, we believe that the student taking this course should be able to relate to the theoretical concepts much more holistically in addition to the general appreciation for experimental physics.
Course contents (details of topics /sections with no. of lectures for each)	- Ionic conductivity - Magnetic Susceptibility using Gouy's method ? - Faraday effect - Generation and transmission of Electromagnetic waves (Lecher Wire) - Blackbody radiation - Franck-Hertz experiment - Determination of ionization potential - Ultrasonic diffraction
Evaluation /assessment	End-Sem Examination-30% Mid-Sem Examination-20% Others-50% for continuous evaluation and lab reports.%
Suggested readings (with full list of authors, publisher, year, edn etc.)	The Art of Experimental Physics: D.W. Preston and E.R. Dietz (1991), John Wiley. An introduction to Error Analysis, John R. Taylor, University Science Books.

	Advanced Practical Physics: B.L. Worsnop and H.T. Flint, Asia Publishing House Analytical Experimental Physics: M. Ference Jr., H.B. Lemon and R. J. Stephenson (1970) University of Chicago Press.