

Course Title	PHYSICS LAB II
Course Code	MPHY-262
Credit Hours	CH 1
Pre- requisites	FSc / A-Level (Physics) or equivalent
Learning outcomes	The objective of this course is to develop laboratory skills in students which provides depth of understanding the physics and laws of physics by performing experiments.
Contents	Electricity and Magnetism: Essentials of the oscilloscope, Function generators, Electromagnets, Transformers, Carey Foster Bridge, Galvanometer and voltmeter, Potentiometer and Ballistic Galvanometer, BH Curve, To study the Acceptors and Rejectors circuits, Earth Magnetic Field, To study the Dielectric constant for different materials, Thermal Physics: To Study the thermal conductivity of materials, study the expansion coefficients of different materials, Application of thermistors and thermo-couples, Specific heat by Calorimeter, Stephan-Constant experiment, Heat Engine Experiment, <i>*Note: Any eight experiments must be performed subject to the availability of apparatus.</i>
Teaching-learning Strategies	Classroom teaching / Lecturing, practical
Assignments- Types and Number	Problem sheet, 3-4, Experimental write-up, data analysis and data plotting, observations and calculations etc.,
Assessment and Examinations	Mid-Term Assessment: 35% Formative Assessment: (25%): It includes classroom participation, attendance, assignments and presentations, homework, attitude and behavior, hands-on-activities, short tests, quizzes etc. Final Term Assessment: 40%
Text Books	1. Physics laboratory experiments by J. D. Wilson, Cengage Learning (2014). 2. General Physics Laboratory I Experiments by K. Clara Castoldi, Kendall Hunt, (2015). 3. Physics Lab Experiments by M. French, Mercury Learning & Information, (2016). 4. Experiments And Demonstrations In Physics: Bar-ilan Physics Laboratory by Kraftmakher Yaakov, World Scientific (2014).