

Programme: M. Sc. (Physics)

Course Code: PHGO-113

Title of the Course: Mini project

Number of Credits: 2

Effective from AY: 2021-22

<u>Prerequisites for the course:</u>	Interest in designing and building electronic circuits by soldering	
<u>Objective:</u>	This course develops skills for designing and building laboratory equipment commonly used in Physics Laboratory.	
<u>Content:</u>	Design and Construct any one of the following instruments on a printed circuit board, make it work and pack it in a box. 1. Constant current source 2. Function Generator 3. Lock-in Amplifier 4. DC differential amplifier 5. Laboratory Power supply	48 hours
<u>Pedagogy:</u>	Laboratory work and self-study	
<u>References/Readings</u>	1. R. Srinivasan, K. R. Priolkar and T. G. Ramesh Experiments in Physics - Laboratory Manual, Indian Academy of Sciences 2017. 2. J. Millman and C. C. Halkias, Integrated Electronics: Analog and Digital Circuits and Systems, Mc Graw Hill International Student Ed. (1972).	
<u>Learning Outcomes</u>	1. To design and build simple laboratory instruments and understand their working. 2. To carry out minor repairs necessary in a laboratory.	