

<b>2018-19 Onwards (MR-18)</b>	<b>MALLA REDDY ENGINEERING COLLEGE (Autonomous)</b>	<b>B.Tech. I Semester</b>		
<b>Code: 80B04</b>	<b>Applied Physics Lab (Common to EEE, ECE, CSE and IT)</b>	<b>L</b>	<b>T</b>	<b>P</b>
<b>Credits: 1</b>		-	-	<b>2</b>

**Course objective:**

The main objective of this course is to provide the necessary exposure to the practical aspects, which is an essential component for learning science.

**List of Experiments:**

- 1 Planck's constant:**  
To determine Planck's constant using Photo electric effect.
- 2 Energy band –gap of a semiconductor:**  
To determine the energy band gap of a semiconductor
- 3 V-I and P-I characteristics of light emitting diode**  
Plot V-I and P-I characteristics of light emitting diode
- 4 Laser diode:**  
To study the Characteristics of Laser diode
- 5 Solar Cell:**  
To study the V-I Characteristics of solar cell
- 6 LCR Circuit:**  
To determination of resonant frequency, bandwidth and quality factor of RLC circuit.
- 7 Numerical Aperture of an Optical fiber:**  
To determine the Numerical aperture of the given fiber
- 8 Bending Loss of a Fiber:**  
To determine the bending loss of the given fiber.
- 9 Light Dependent Resistance (LDR):**  
To determine the characteristics of a LDR
- 10 Stewart and Gee's experiment**  
Determination of Magnetic field along the axis of current carrying circular coil

**Course Outcomes:**

On Completion of this course, students are able to:

1. Develop skills to impart practical knowledge in real time solution.
2. Understand principle, concept, working, application and comparison of results with theoretical calculations.
3. Design new instruments with practical knowledge.

4. Understand measurement technology, usage of new instruments and real time applications in engineering studies.