

**DEPARTMENT OF PHYSICS**  
**DEVA MATHA COLLEGE, KURAVILANGAD**

**Affiliated to Mahatma Gandhi University, Kottayam**



**SYLLABUS**

**of**

**ADD-ON COURSE**

**in**

**LED LIGHT – MECHANICAL ASSEMBLY**

*(Conducted for II DC Physics students)*

**Academic Year: 2018-19**



**DEVA MATHA COLLEGE KURAVILANGAD**

**DEPARTMENT OF PHYSICS**

*Add on Courses offered for Students: 2018-2019*

## **LED Light, Mechanical Assembly**

**Department Coordinator: Dr. Syju Thomas**

Title:	LED light - Mechanical Assembly
Instructional Hours:	30 Hours
Duration:	3 months
Mode of Instruction:	Offline
Intake Capacity:	30
Eligibility:	+2

# **Add-on Course in LED light - Mechanical Assembly**

Duration: 30 hours

## **Course Objectives**

- To familiarize electronic components and the procedure of soldering
- To provide fundamental understanding of LED
- To practice the knowledge gained in assembling various LED luminaries such as LED bulb, LED tube light etc.

## **Syllabus**

### **Module 1 (2 hrs)**

Introduction and understanding safety procedure & preventive measures against electrical accidents

### **Module 2 (4 hrs)**

Awareness of electronic components, pick & place process, soldering

### **Module 3 (10 hrs)**

Hobby circuit design and assembling – Clap Switch, Burglar Alarm, Water Level Indicator, Automatic Night Lamp

### **Module 4 (4 hrs)**

LED Basics : Operating voltage & current, Thermal Management, Array configuration

### **Module 5 (10 hrs)**

Driver selection & All the aspects related to LED Luminary Assembly

## **Course Outcome**

- The students get a rigorous idea about various electronic components and the procedure of soldering.

- The students acquire basic understanding of the principle behind light emitting diode.
- The students get hands-on training in assembling various LED luminaries such as LED bulb, LED tube light etc. that promotes their employability and entrepreneurial skills.

### **Mode of Evaluation**

### **Assessment Procedure**

- 1) Attendance
- 2) Examination

### **Grading**

Marks Obtained (%)	Grade
90 and above	S
85-89	A
80-84	B
75-79	C
Below 75	D



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