

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: 2019-20



DEVA MATHA COLLEGE KURAVILANGAD

DEPARTMENT OF PHYSICS

Add on Courses offered for Students: 2019-2020

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



Anand Mathew

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