

DEPARTMENT OF PHYSICS
DEVA MATHA COLLEGE KURAVILANGAD

Affiliated to Mahatma Gandhi University, Kottayam



REPORT

of

ADD-ON COURSE

in

LED LIGHT – MECHANICAL ASSEMBLY

(Conducted for II DC Physics students)

Academic Year : 2023-2024



*Deva Matha College
Kuravilangad, Kottayam,
Kerala - 686633*

Add-on Course in

DMCK/PHY/AD23/2021 : LED light - Mechanical Assembly

Duration: 30 hours

Number of students enrolled : 16

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



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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

Attendance and Examination



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List of students enrolled

| Sl. No. | Class No. | Name |
|---------|-----------|---------------------------|
| 1 | 22UG251 | ARATHI RAJEEV |
| 2 | 22UG252 | ASHNA SUNNY |
| 3 | 22UG253 | <u>KEVIN</u> PETER BABU |
| 4 | 22UG254 | <u>SREENANDA</u> R NAIR |
| 5 | 22UG256 | <u>ADITHYASANKAR</u> L |
| 6 | 22UG257 | <u>AISWARYA</u> THAMPI |
| 7 | 22UG258 | <u>AISWARYA</u> LAKSHMI P |
| 8 | 22UG259 | AMRUTHA BABU |
| 9 | 22UG260 | <u>ARJUN</u> P M |
| 10 | 22UG261 | <u>ARSHA</u> SIBY |
| 11 | 22UG262 | <u>DEEPIKA</u> NAIR D |
| 12 | 22UG263 | <u>GAYATHRI</u> DEVI N R |
| 13 | 22UG264 | HARIPRIYA M |
| 14 | 22UG265 | <u>JAYALAKSHMI</u> L J |
| 15 | 22UG266 | <u>NANDANA</u> GIREESH |
| 16 | 22UG267 | <u>SUMITH</u> K S |



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Feedback Form of 'LED Light – Mechanical Assembly'

| Timestamp | 1. Name | 2. Class No. | 3. How do you rate the course as a whole? | 4. How do you rate the co-ordination of the course by the Department of Physics? | 5. How do you rate the usefulness of this course? |
|-----------------------|-------------------------------------|--------------|---|--|---|
| 3/27/2024 10:47:32 | ARATHI RAJEEV | 22UG251 | 5 | 5 | 5 |
| 3/27/2024 12:02:24 | ASHNA SUNNY | 22UG252 | 5 | 5 | 5 |
| 3/27/2024 16:24:50 | <u>KEVIN</u> PETER BABU | 22UG253 | 5 | 5 | 5 |
| 3/27/2024 12:36:31 | <u>SREENANDA</u> R NAIR | 22UG254 | 5 | 5 | 5 |
| 3/27/2024 14:18:36 | <u>ADITHYASANKAR</u> L | 22UG256 | 5 | 5 | 5 |
| 3/27/2024 16:24:50 | <u>AISWARYA</u> THAMPI | 22UG257 | 5 | 5 | 5 |
| 3/27/2024 17:27:53 | <u>AISWARYA</u> <u>LAKSHMI</u> P | 22UG258 | 5 | 5 | 5 |
| 3/27/2024 17:29:30 | <u>AMRUTHA</u> BABU | 22UG259 | 3 | 5 | 4 |
| 3/27/2024 12:36:31 | <u>ARJUN</u> P M | 22UG260 | 5 | 5 | 5 |
| 3/27/2024 17:55:35 | <u>ARSHA</u> SIBY | 22UG261 | 5 | 5 | 5 |
| 3/27/2024 18:31:35 | <u>DEEPIKA</u> NAIR D | 22UG262 | 2 | 1 | 1 |
| 3/27/2024 19:48:44 | <u>GAYATHRI</u> DEVI N R | 22UG263 | 4 | 5 | 4 |
| 3/27/2024 20:17:57 | <u>HARIPRIYA</u> M | 22UG264 | 5 | 5 | 5 |
| 3/27/2024 22:13:01 | <u>JAYALAKSHMI</u> L J | 22UG265 | 5 | 5 | 5 |
| 3/27/2024 22:30:24 | <u>NANDANA</u> GIREESH | 22UG266 | 5 | 5 | 5 |
| 3/27/2024 23:15:17 | <u>SUMITH</u> K S | 22UG267 | 5 | 5 | 5 |



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Exam Marklist

| Sl. No. | Name | Class No. | Score |
|---------|---------------------------|-----------|-------|
| 1 | ARATHI RAJEEV | 22UG251 | 30/30 |
| 2 | ASHNA SUNNY | 22UG252 | 29/30 |
| 3 | <u>KEVIN</u> PETER BABU | 22UG253 | 28/30 |
| 4 | <u>SREENANDA</u> R NAIR | 22UG254 | 30/30 |
| 5 | <u>ADITHYASANKAR</u> L | 22UG256 | 28/30 |
| 6 | <u>AISWARYA</u> THAMPI | 22UG257 | 30/30 |
| 7 | <u>AISWARYA</u> LAKSHMI P | 22UG258 | 30/30 |
| 8 | <u>AMRUTHA</u> BABU | 22UG259 | 28/30 |
| 9 | <u>ARJUN</u> P M | 22UG260 | 30/30 |
| 10 | <u>ARSHA</u> SIBY | 22UG261 | 30/30 |
| 11 | <u>DEEPIKA</u> NAIR D | 22UG262 | 30/30 |
| 12 | <u>GAYATHRI</u> DEVI N R | 22UG263 | 27/30 |
| 13 | <u>HARIPRIYA</u> M | 22UG264 | 30/30 |
| 14 | <u>JAYALAKSHMI</u> L J | 22UG265 | 29/30 |
| 15 | <u>NANDANA</u> GIREESH | 22UG266 | 28/30 |
| 16 | <u>SUMITH</u> K S | 22UG267 | 30/30 |



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DEVA MATHA COLLEGE KURAVILANGAD

Founded in 1964

RE-ACCREDITED BY NAAC WITH A++ GRADE (CGPA 3.67)

Kuravilangad P.O., Kottayam, Kerala, India - 686 633 | Affiliated to Mahatma Gandhi University, Kottayam

CERTIFICATE

This is to certify that **Arsha Siby** has successfully completed the Add-on Programme titled **LED Light – Mechanical Assembly** (DMCK/ PHY/AD 09/2023) conducted by the Department of Physics of Deva Matha College Kuravilangad during the academic year 2023-2024 with **S** grade.

Certificate no. 231

Dr. Saritha K. Jose
Programme Co-ordinator

Dr. Brincy Mathew
General Co-ordinator

Dr. Sunil C. Mathew
Principal

Kuravilangad
31/03/2024