Department of Physics
Sacred Heart College, Chalakudy

Add-on Course

ADPH23 - Basics Electrical Maintenance and LED Lighting Essentials

Total course hours: 30

Syllabus (2023)

Course Description:

The Basics of Electrical Maintenance and LED lighting essentials course is designed to provide participants with a fundamental understanding of electrical systems and equip them with the skills necessary for performing basic electrical maintenance tasks. The course will cover essential concepts, safety guidelines, and practical techniques to ensure the smooth operation and maintenance of electrical equipment. The course will also cover the KSEB bill calculation and LED lighting basics.

Module 1: Basics of Electricity

Introduction to voltage, current, resistance, and power, AC, DC. Ohms law, KSEB meter reading and bill calculation.

Module 2: Safety Procedures and Tools for Electrical Maintenance

Importance of electrical safety: hazards, risks, and preventive measures. Essential tools for electrical maintenance: multimeters, testers, pliers, screwdrivers, etc. Proper usage and handling of tools.

Module 3: Electrical Components and Troubleshooting

Basic study of Electrical components: conductors, insulators, switches, fuses, resistors, capacitors, inductors, switches and transformers. Role of each component in electrical circuits. Electrical diagrams.

Approaches to diagnosing common electrical issues. Hands-on exercises in identifying and rectifying basic circuit problems.

Module 4: LED Lighting Essentials

Voltage step down devices and Rectifiers, LED polarity and working voltage. Serial connections. LED bulb repairing.

Module 5: Hands-on Practical Projects

Participants work on real-world electrical maintenance projects. Applying knowledge gained throughout the course to solve practical problems.

Register of Attendance and Fees for the Month of

2023-24 Add-on Course: Basic Electrical Maintenance and LED Lighting Essentials

Admission No.	S.No.	NAME	Days Eng: Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Economics	1	Sandra Sasi		X	X	X	X	A	X	X	X	X	X	X	X	X	A	X	X	
	2	Alima M T		X	X	A	X	X	X	X	A	X	X	X	A	X	X	X	A	
	3	Anagha Xavier Abil		X	A	X	A	A	A	X	A	A	—	—	—	—	—	—	—	
English	4	Saniya Afsal.		X	X	X	X	A	X	A	X	X	A	X	X	A	X	X	X	
History	5	Malu Mani		A	X	A	A	X	X	X	A	X	X	X	X	X	A	X	X	
	6	Abiya Rajan.		A	X	A	X	X	X	X	X	A	X	A	X	X	X	A	X	
	7	Jaisly Sebastian.		X	X	X	X	X	X	X	A	X	X	X	A	X	X	X	A	
Physics	8	Nesan Maria Baiju.		X	A	A	X	X	X	A	X	X	A	X	X	X	A	X	X	
	9	Anagha V R.		X	X	X	X	X	A	X	X	X	X	X	X	A	X	X	X	
Zoology	10	Rose Maria Johnson.		X	X	X	X	A	X	X	X	X	X	A	A	X	A	X	X	
	11	Gayjitha Surin		X	A	X	X	X	X	X	X	X	X	X	X	A	A	X	X	
	12	Nayana K S																		

Course Tutor: Nijo

Dr. Nijo Varghese.