

COURSE CONTENT

Duration: 30 hours

I. Electrical Fundamentals: (.15 hours)

How electricity is produced and distributed, voltage, current and resistance, Ohms law, resistors, capacitors, colour code, Faraday's law of electromagnetic induction, voltage step-up and step-down process, diodes, AC-DC conversion, single phase and three phase circuits, fuse, earthing, units of electricity, electricity bill calculation.

II. Practical (Hands-on circuit building activities):(10 Hours)

1. Use multi-meter readings to measure voltage, current, continuity, resistance, etc...
2. Hands-on circuit (parallel and series circuits) building activities (soldering) with resistors, capacitors, diodes and LEDs.
3. Construction of rectifier- voltage step down and AC to DC conversion.
4. Clearing different modes of failure: open circuits, short circuits, and ground faults.

III. Dissertation Project: (5 Hours) Your dissertational project will ideally be related to daily live electricity.


Dr. Sijo AK
Head & Ass. Professor
Department of Physics
Mary Matha Arts & Science College
Vemom PO, Marathwada, 610345