Kerala Technological university KTU First year B.tech Syllabus
for **EE110Electrical Engineering Workshop**

Course No. : EE110

Course Name: Electrical Engineering Workshop
L-T-P-Credits: 0-0-2-1

Year of Introduction: 2015
Course Objectives,Syllabus:

The objective of this course is to set a firm and solid foundation in Electrical Engineering with strong analytical skills and conceptual understanding of basic laws and analysis methods in electrical and magnetic circuits.

List Of Exercises / Experiments (Minimum Of 8 Mandatory)

Identify different types of cables/wires and switches and their uses.

Identify different types of fuses & fuse carriers, MCB and ELCB, MCCB with ratings and usage.

Wiring of simple light circuit for controlling light/fan point (PVC conduit wiring).

Wiring of light/fan circuit using Two way switches (Staircase wiring)

Wiring of fluorescent lamps and light sockets (6 A)

Wiring of Power circuit for controlling power device (16A socket)

Godown wiring / Tunnel wiring

Wiring of power distribution arrangement using single phase MCB distribution board with ELCB, Main switch and Energy meter.

Measurement of voltage, current, resistance, inductance, and capacitance in a given RLC circuit using LCR meter and Multimeter.

Measurement of voltage, current and power in single phase circuit using voltmeter, ammeter and wattmeter. Calculate the power factor of the circuit.

Wiring of backup power supply including inverter, battery and load.

Demonstration of electric iron, mixer grinder, single phase pump, exhaust fan.

Expected outcome

Familiarity with supply arrangements and their limitations, knowledge of standard voltages and their tolerances, safety aspects of electrical systems and importance of protective measures in wiring systems.

Knowledge about the types of wires, cables and other accessories used in wiring. Creating awareness of energy conservation in electrical systems.

Students should be able to wire simple lighting circuits for domestic buildings, distinguish between light and power circuits.

To measure electrical circuit parameters and current, voltage and power in a circuit. Familiarity with backup power supply in domestic installation.