

## **BEE-102      Electrical Wiring, Estimating & Costing**

<b>Course category</b>	: Basics of Electrical Engg
<b>Pre-requisite Subject</b>	: NIL
<b>Contact hours/week</b>	: Lecture : 1, Tutorial : 0 , Practical: 1
<b>Number of Credits</b>	: 2
<b>Course Assessment methods</b>	: Continuous assessment through attendance, home assignments, quizzes, practical work, record, viva voce and Practical Examination
<b>Course Outcomes</b>	: The students are expected to be able to demonstrate the following knowledge, skills and attitudes after completing this course

1. Basics of Electrical home Wiring
2. Basics of earthing phenomena in home wiring and any premises. Protection of human body from electric shocks. Utility of MCB and fuses.
3. Basic principles Fan windings and small motor windings.
4. Learn different types Joints of cable and overhead conductor.
5. Analysis of different types of wiring and Safety measures

### **Topics Covered**

Different types of Wiring; single way, 2- way wiring system, staircase wiring.

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Requirement of Fuse and MCB, Electric shock, Earthing system; requirement of earthing, different methods of earthing. Significance of phase and neutral, Various joints systems, joints of cables and wires. Basic principle of operation of fan and motor winding. Estimation of internal home wiring.

### **Experiments**

1. To perform single way wiring system.
2. To perform two-way wiring system.
3. To perform staircase wiring system.
4. Design of earthing system.
5. To repair a fan and its winding.
6. Design of single-phase motor winding.
7. To perform tube light wiring.
8. To perform different types of cable joints

**Books & Reference Books:**

- 1 Electrical Wiring Estimating and Costing by S. L. Uppal. Khanna Publishers.**
- 2. Practical Hand Book on Electric Motors, Starters and Controllers by M.P. Krishna Pillai, Standard Publishers Distributers.**
- 3. Advanced Home Wiring by Black & Decker, 5<sup>th</sup> Edition, Editors of Cool Spring press**