

Basic Electrician Course (2 Months)

“Job Ready Course”

Course Title: Introduction to Basic Electrical Systems (Part-Time Skill Development Course)

Duration: 2 Months

Mode: Part-Time (Weekend Classes)

Eligibility: 10th Pass

Course Fee: ₹2000/-

Course Overview:

This part-time course is designed to introduce students to the basics of electrical systems, with a focus on household wiring and electrical safety. Over 2 months, students will gain practical skills and theoretical knowledge to perform basic electrical tasks, prepare for self-employment, or enhance their skills for future job opportunities in the electrical field.

Course Objectives:

- **Basic Electrical Knowledge:** Understand the fundamentals of electricity, components, and basic wiring systems.
- **Hands-on Training:** Learn practical skills for handling electrical circuits, tools, and wiring.
- **Electrical Safety:** Focus on safety standards to prevent electrical hazards in residential settings.
- **Career & Self-Employment Preparation:** Enable students to offer basic electrical services or pursue further specialization in the electrical industry.

Course Content:

Module 1: Electrical Safety & Tools

- Importance of electrical safety
- Basic first aid and injury prevention
- Common electrical hazards and how to avoid them
- Introduction to basic tools (multimeter, pliers, wire cutters, etc.)

- Proper use and maintenance of electrical tools

Module 2: Basic Electricity & Electrical Circuits

- What is electricity? Introduction to current, voltage, and resistance
- Understanding Ohm's Law and its applications
- Simple electrical circuits: Series and parallel connections
- Identifying electrical components (wires, switches, fuses, sockets)

Module 3: Domestic Wiring Basics

- Types of wiring systems used in homes
- How to plan a basic electrical layout for a house
- Identifying common electrical components (outlet boxes, switches, lights)
- Basic wiring techniques: Stripping wires, connecting wires, and making joints
- Installing electrical outlets, switches, and lighting fixtures

Module 4: National Electrical Code (NEC) Basics

- Overview of the National Electrical Code (NEC)
- Understanding basic electrical code requirements for residential wiring
- Importance of compliance with safety standards

Module 5: Practical Wiring Exercises

- Hands-on practice with wiring switches, outlets, and basic lighting circuits
- Creating a simple electrical circuit and testing it with a multimeter
- Troubleshooting basic electrical problems (e.g., dead outlets, faulty wiring)
- Introduction to electrical fault detection

Module 6: Electrical Maintenance and Troubleshooting

- Identifying and repairing common electrical faults in homes
- How to replace electrical components safely (fuses, switches, outlets)
- Preventative maintenance for household electrical systems

Course Delivery:

- **Format:** The course will be delivered part-time with evening or weekend sessions (3-4 hours per session).
 - **Mode of Instruction:** In-person classes with a mix of theoretical lessons and hands-on training.
 - **Practical Sessions:** Every class will include practical, real-world applications of electrical tasks.
 - **Assessments:** Practical assessments to gauge student understanding and skill development.
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Career & Self-Employment Opportunities:

- **Part-Time Jobs:** After completing the course, students will be equipped to work part-time as assistant electricians, performing basic wiring, repairs, and installations for residential properties.
 - **Self-Employment:** Students can start offering basic electrical services to local customers, including home wiring, electrical repairs, and maintenance.
 - **Further Studies:** This foundational course prepares students to pursue further specialization in advanced electrical systems or become licensed electricians.
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Course Completion & Certification:

- Upon successful completion of the course, students will receive a **Certificate in Basic Electrical Systems**.
 - The certificate will serve as proof of foundational knowledge in household electrical wiring and safety, preparing students for entry-level work in the electrical field.
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This part-time course is perfect for individuals looking to gain foundational skills in electrical work without committing to a full-time program. Whether for personal development, self-employment, or enhancing career prospects, this course will provide you with the essential skills to work safely and efficiently with electrical systems in residential settings.

Hand Tools

1. **Screwdriver set** (Insulated - Flat and Cross)
 2. **Pliers**
 - Lineman's pliers
 3. **Wire Strippers**
 4. **Crimping Tool**
 5. **Electrical Tape**
 6. **Utility Knife**
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Power Tools

1. **Cordless Drill**
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Testing Tools

1. **Multimeter**
 2. **Continuity Tester**
 3. **Tester.**
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Safety Gear

1. **Insulated Gloves**
 2. **Safety Glasses**
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Additional Tools

1. **Fish Tape**
2. **Measuring Tape**
3. **Flashlight/Headlamp**

Materials

1. Electrical Wires

- Various sizes (e.g., 1.5mm, 2.5mm) for practice.

2. Switches

- Single-pole and double-pole switches.

3. Sockets and Plugs

- For testing connections.

4. Bulbs and Holders

- For practicing lighting circuits.

5. Electrical Board/Panel

- For mounting switches and sockets.

6. Connectors and Terminals

- To join wires properly.

7. PVC Conduits and Boxes

- For running and securing wires.

8. Nails and wire Cleats