

**TRAINING TITLE**

**BASIC ELECTRICAL WORKSHOP EQUIPMENT**

**Training Duration**

**5 day**

**Training Venue and Dates**

<b>Ref. No.</b> EE195	<b>Basic Electrical Workshop Equipment</b>	<b>5</b>	<b>11-15 Aug. 2025</b>	<b>\$5,500</b>	<b>Abu Dhabi, UAE</b>
--------------------------	--	----------	------------------------	----------------	-----------------------

In any of the 4 or 5-star hotels. The exact venue will be informed later.

**Training Fees**

- \$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch

**Training Certificate**

**Define** Management Consultants Certificate of course completion will be issued to all attendees.

**TRAINING DESCRIPTION**

This 5-day course is designed for individuals who wish to gain foundational knowledge and hands-on experience with basic electrical workshop equipment. Whether you're a student, technician, or hobbyist, this course will provide you with a thorough understanding of essential electrical tools, safety protocols, and practical applications. Participants will learn how to properly use and maintain basic electrical equipment for tasks ranging from installations and repairs to troubleshooting.

**TRAINING OBJECTIVES**

**By the end of the course, participants will be able to understand**

1. Fundamentals of Electrical Workshop Tools:
2. Acquire Proficiency in Tool Safety and Best Practices:
3. Learn Skills in Basic Electrical Tools:
4. Become Proficient in Electrical Measurement and Testing:
5. Understand Electrical Installations and Maintenance:
6. Learn Troubleshooting and Problem-Solving Techniques:
7. Gain Insight into Preventive Maintenance of Electrical Equipment:

DMCT/OL/9/18(Rev3Dt:23/9/18)

## **WHO SHOULD ATTEND?**

The Basic Electrical Workshop Equipment course is designed for individuals who are interested in learning the foundational skills and safety practices required for using electrical tools and equipment in both professional and personal contexts

## **TRAINING METHODOLOGY**

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.

Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work & Practical Exercises
- 20% Videos & General Discussions

## **COURSE PROGRAM:**

### **Day 1: Introduction to Electrical Workshop Equipment & Safety Protocols**

- Session 1: Introduction to Electrical Workshop Tools
  - Overview of basic electrical tools: hand tools, power tools, measuring instruments, and safety equipment
  - Key differences between tools used for residential, commercial, and industrial applications
  - Understanding the importance of tool selection for specific tasks
- Session 2: Electrical Safety Fundamentals
  - Basic electrical safety principles: PPE (Personal Protective Equipment), grounding, and circuit protection
  - Safe handling and operation of electrical tools
  - Understanding electrical hazards and risk management (e.g., shocks, burns, fire prevention)
- Session 3: Workplace Safety Standards and Procedures
  - Familiarization with local and international electrical safety standards (e.g., IEC, NEC)
  - Best practices for a safe working environment in electrical workshops
  - Emergency procedures, including first aid and electrical fire protocols

### **Day 2: Basic Hand Tools for Electrical Work**

- Session 1: Wire Stripping and Cutting Tools
  - Understanding wire gauges and insulation

*DMCT/OL/9/18(Rev3Dt:23/9/18)*

- Correct usage of wire strippers, cutters, and crimpers
- Techniques for cutting and stripping various types of wires (e.g., solid, stranded, multiconductor cables)
- Session 2: Electrical Soldering and Crimping
  - Introduction to soldering irons and soldering techniques
  - Proper crimping procedures for connectors and terminals
  - Safety measures for soldering and avoiding common mistakes
- Session 3: Screwdrivers, Pliers, and Wrenches
  - Overview of various screwdrivers and their uses in electrical work
  - Using pliers for bending, twisting, and gripping wires and components
  - Proper use of electrical wrenches and torque tools

### Day 3: Electrical Measuring Instruments

- Session 1: Introduction to Multimeters
  - Overview of digital and analog multimeters
  - How to measure voltage, current, resistance, and continuity
  - Understanding multimeter settings and proper usage for basic electrical diagnostics
- Session 2: Insulation Resistance Testers and Clamp Meters
  - Using insulation resistance testers for ensuring safe installations
  - Overview of clamp meters and how to measure current without interrupting the circuit
  - Using the tools for troubleshooting electrical systems
- Session 3: Proper Tool Calibration and Maintenance
  - Calibration procedures for ensuring accuracy of measuring tools
  - Regular maintenance routines for electrical testing equipment
  - Troubleshooting common issues with electrical meters and testers

### Day 4: Power Tools and Electrical Installations

- Session 1: Drills, Sawing, and Cutting Tools
  - Introduction to power drills, saws, and cutters used in electrical work
  - Safety precautions for using power tools (e.g., drills, saws, hole cutters)
  - Applications of cutting tools for electrical conduit and wiring installations
- Session 2: Circuit Breakers, Switches, and Wiring Tools
  - Proper installation techniques for circuit breakers, switches, and outlets
  - Tools for conduit bending, crimping, and cable management
  - Overview of electrical box mounting and wiring methods
- Session 3: Using Electrical Testing Equipment for Installations
  - Testing electrical systems after installation for safety and functionality
  - Verifying correct wiring and load distribution
  - Troubleshooting installation issues using electrical testing equipment

*DMCT/OL/9/18(Rev3Dt:23/9/18)*

Day 5: Electrical Workshop Techniques & Troubleshooting

- Session 1: Basic Troubleshooting Techniques
  - Introduction to common electrical issues (e.g., circuit overloads, short circuits, wiring faults)
  - Systematic troubleshooting methods for diagnosing faults
  - Using tools like multi-meters and circuit testers to pinpoint electrical problems
- Session 2: Working with Electrical Panels and Systems
  - Overview of electrical panels and their components (e.g., breakers, fuses, busbars)
  - Correct handling and maintenance of electrical panels
  - Troubleshooting problems within electrical panels (e.g., tripped breakers, faulty connections)
- Session 3: Preventive Maintenance and Equipment Care
  - Importance of routine inspections and maintenance for electrical tools
  - Techniques for extending the life of electrical equipment and tools
  - Preventing wear and tear through proper storage and handling

**NOTE:**

**Pre-& Post Tests will be conducted.**

**Case Studies, Group Exercises, Group Discussions, Last Day reviews, and assessments will be carried out.**

[www.definettraining.com](http://www.definettraining.com)

DMCT/OL/9/18(Rev3Dt:23/9/18)

P.O BOX 45304  
ABU DHABI, U.A.E

T +971 2 6264455  
F +971 2 6275344

[www.definettraining.com](http://www.definettraining.com)