

INDUSTRIAL MAINTENANCE: ELECTRICIAN

Levels 1-5

Targeted and intensive training pathways on key concepts, techniques and best practices tailored to specific job functions within industrial maintenance.

Total # of Modules: 66

Total Hours: 71



ELECTRICIAN

Level 1

Introduction to Electricity

- 1.1 Production of Electricity
- 1.2 Transmission and Distribution of Electricity
- 1.3 Uses of Electricity
- 1.4 Atomic Structure
- 1.5 Electrical Circuits
- 1.6 Electrical Current
- 1.7 Voltage
- 1.8 Electrical Power
- 1.9 Resistance
- 1.10 Ohm's Law
- 1.11 Location Tolerances

Level 2

DC Electricity

- 2.1 Direct Current
- 2.2 Batteries
- 2.3 Circuit Analysis

AC Electricity

- 2.4 Electromagnetism
- 2.5 AC Waveform Generation
- 2.6 Electromagnetic Devices
- 2.7 Transformers
- 2.8 Capacitors

Solid State Electricity

- 2.9 Semiconductors
- 2.10 Solid State Devices

Introduction to Wiring

- 2.11 Wires, Connectors, and Circuit Protection
- 2.12 Connecting Transformers

Introduction to Electric Motors

- 2.13 DC Motors
- 2.14 AC Single-Phase Motors
- 2.15 Three-Phase AC Motors

Level 3

Electrical Connectors

- 3.1 Electrical Connectors and Fasteners

Fiber Optics

- 3.2 Fiber Optics and Light
- 3.3 Manufacturing Optical Fiber
- 3.4 Fiber Optic Cable
- 3.5 Handling Fiber Optic Cable
- 3.6 Quality and Safety

Sensor Technology

- 3.7 Introduction to Sensors Technology
- 3.8 Sensor Technology
- 3.9 Proximity Sensors
- 3.10 Position, Speed and Acceleration Sensors
- 3.11 Industrial Process Sensors
- 3.12 Advanced Sensors

Electrical Hand Tools

- 3.13 Hand Tools for Electrical Wiring

Electrical Measurement Conversion

- 3.14 Electrical Measurement and Unit Conversion

Level 4

Electrical Resistance Test Equipment

- 4.1 Resistance Test Equipment
- 4.2 The Fluke® Multimeter
- 4.3 The Biddle® Ohmmeter
- 4.4 The Avtron® Ohmmeter
- 4.5 The Hewlett Packard® Milliohmeter
- 4.6 The BCD M1® Ohmmeter

Crimping Terminals and Splices

- 4.7 Terminals and Splices
- 4.8 Crimping
- 4.9 Crimping a Terminal
- 4.10 Crimping a Pre-insulated Splice

Assembly of Coaxial Connectors

- 4.11 Coaxial Cable
- 4.12 Coaxial Connectors
- 4.13 Coaxial Connector Tools
- 4.14 Coaxial Connector Assembly

Level 5

Fasteners

- 5.1 Temporary Fasteners
- 5.2 Rivets
- 5.3 Bolts, Screws, and Washers
- 5.4 Threaded Inserts
- 5.5 Hi-Loks
- 5.6 Lockbolts
- 5.7 Nut Plates
- 5.8 Blind Rivets
- 5.9 Identifying Fasteners
- 5.10 Fasteners and Fits
- 5.11 Securing and Lockwiring Fasteners
- 5.12 Torque Tools