## On-Line Industrial Maintenance Technician Electrical Training Program Summary

- **INTRODUCTION** - $60, 5 HRS
  - Rea5 – Study Skills
  - MPR1 - Maintenance Principles
  - TRB1 – Maintenance Troubleshooting Procedures

- **BASIC MATH** - $80, 8 HRS
  - MAT1 – Whole Numbers
  - MAT2 – Fractions
  - MAT3 – Decimals
  - MAT4 – Algebra

- **PRINT READING** - $187, 20 HRS
  - TPC102 – Reading Schematics & Symbols

- **SAFETY & HEALTH** - $120, 12 HRS
  - PPE7 - Personal Protective Equipment: Don’t Start Work Without It
  - LOT9 - Lockout/Tagout: Lightening in A Bottle
  - ELE5 - Electrical Safety: Beware the Bite
  - MAC0 - Machine Guarding: Safeguarding Your Future
  - HAZ2 - HazCom: In Sync with GHS
  - ELE0 - ArcFlash: Live to Tell

- **OSHA 10 HOUR GENERAL INDUSTRY** - $150, 10 HRS

- **BASIC ELECTRICITY/ELECTRICAL MEASUREMENTS** - $160, 16 HRS
  - ELS1 – Industrial Electricity Basic Principles
  - ACDC1 – Current
  - ACDC2 – Voltage
  - ACDC3 – Resistance
  - ACDC4 – Ohm’s Law
  - ACDC5 – Magnetism
  - ACDC6 – Electrical Measurements
  - ACDC10 – AC Measurements

- **TPC204.1 – ELECTRICAL MEASURING INSTRUMENTS** - $187, 20 HRS

- **DC CIRCUITS / FUNDAMENTALS** - $80, 8 HRS
  - ACDC7 – DC Circuits
  - ADC2 – Ohm’s Law & DC Circuits
  - ADC3 – Electronic Components and Magnetism
  - ADC4 – Electronic Schematics and Circuit Analysis

- **AC CIRCUITS / TRANSFORMERS** - $140, 14 HRS
  - ELS2 – Industrial Electricity: Alternating Current
  - ELS3 – Industrial Electricity: Conductors
  - ACDC8 – Inductance & Capacitance
  - ACDC11 – Capacitive Circuits
  - ACDC12 – Inductive Circuits
  - ACDC 13 – Transformers
  - ACDC 14 – Tuned Circuits

- **MOTOR DRIVES** - $140, 14 HRS
  - MTD1 – Motor Drive Identification
  - MTD2 – Open and Closed Loop Systems
  - MTD3 – Variable Speed AC Drives
  - MTD4 – Servo & Stepper Motors
  - MTD5 – AC Motor Operation
  - MTD6 – AC Drive Selection and Setup
  - INS6 – Operator Inspection: Motor Drive System Inspection

- **AC/DC EQUIPMENT & CONTROLS** - $140, 14 HRS
  - ELS6 – Industrial Electricity: Generators and Motors
  - ELS 7 – AC Motor Control and Current Measurement
  - DCM1 – DC Motors: Basics and Parts of DC Motors
  - DCM2 – DC Motors: Wiring Diagrams and Troubleshooting
  - DCC1 – DC Motor Controllers – Controller Function and Operation
  - DCC2 – DC Motor Controllers – Maintenance and Troubleshooting
  - INS5 – Operator Inspection: Electrical Equipment Control System Inspection

- **MOTOR CONTROLS** - $180, 18 HRS
  - MTR1 – Basic Motor Controls & Relays
  - MTR2 – Overload Protection Devices
  - MTR3 – Motor Controls: Time Delay Relays
  - MTR4 – Motor Controls: Schematics/Symbols
  - MTR5 – Motor Control: Schematics and Wiring Diagrams
  - MTR6 – Motor controls: Starting Methods for Squirrel Cage Motors
  - MTR7 – Wye-Delta, Synchronous, & Wound Rotor Controls
  - MTR8 – Motor Controls: Installing/Troubleshooting
  - TRB3 – Troubleshooting: Motors and Motor Controls

- **POWER SUPPLIES** - $60, 6 HRS
  - ELS4 – Industrial Electricity: Wiring
  - ELS5 – Industrial Electricity: Installation, Distribution, Lighting
  - TRB2 – Maintenance Troubleshooting: Power Distribution & Lighting Systems

- **VALVES** - $80, 8 HRS
  - CVA1 - Control Valves & Actuators: Basics & Functions
  - CVA2 - Control Valves: Types and Designs
• CVA3 - Control Valves: Fundamentals & Selection
• CVA4 - Control Valves: Sizing & Installation

**ELECTRONIC COMPONENTS & CIRCUITS - $380, 38 HRS**
• BEC1 – Basic Electronic Components: Types and Diagrams
• BEC2 – Basic Electronic Controls and Applications
• BEC3 – Basic Electronic Operation and Troubleshooting
• ECI1 – Electronic Circuits: Basic Principles
• ECI2 – Electronic Circuits: Characteristics and Operation
• ECI3 – Electronic Circuits: Logic Fundamentals, Types & Application
• EMS1 – Electronic Maintenance: Solid State Devices
• EMS2 – Integrated Circuits and Op Amps
• EMS3 – Sensor & Transducer Principles
• EMS4 – Transmitters
• EMS5 – Transducers
• EMS6 – Controllers, Indicators, & Recorders
• MEC1 – Mechanical Electrical Control: Intro to Control Schematics
• MEC2 – Creating Schematics
• MEC3 – Electrical Lockout
• MEC4 – Design and Troubleshooting
• MEC5 – Energy Management
• MEC6 – Electronic Controls
• MEC7 – Responsive Systems

**PROGRAMMABLE LOGIC CONTROLLERS (PLC) - $160, 16 HRS**
• PLC1 – Fundamentals
• PLC2 – Programming
• PLC3 – Inputs and Outputs
• PLC4 – Troubleshooting
• PLC5 – Communications & Advanced Programming
• RSX1 – Configuring Hardware and Software
• RSX2 – Programming and Editing
• RSX3 – Testing / Troubleshooting Functions

**MEASUREMENT/INSTRUMENTATION - $360, 28 HRS**
• PME1 – Temperature Measurement: Thermometers and Thermocouples
• PME2 – Temperature: Resistance & Radiation Devices
• PME3 – Pressure Measurement: Manometers and Gages
• PME4 – Pressure: Indicators and Transmitters
• PME5 – Level Measurement: Measurement & Gages
• PME6 – Level: Indicators and Transmitters
• PME7 – Flow Measurement
• PME8 – Flow Sensors
• CTE1 – Primary Calibration standards
• CTE2 – Pneumatic Test Equipment
• CTE3 – Electronic Test Equipment
• CTE4 – Oscilloscopes
• CTE5 – Instrument Errors
• CTE6 – Instrument Calibration

**PROCESS CONTROL / INSTRUMENTATION - $270, 18 HRS**
• BPR1 – Basic Process Control: Feedback Control
• BPR2 – Basic Process Control: Process Control Modes
• BPR3 – Basic Process Control: Process Characteristics
• BPR4 – Basic Process Control: Process Variables
• BPR5 – Basic Process Control: Instrumentation Symbols
• BPR6 – Basic Process Control: Instrumentation Loop Diagrams
• BPR7 – Basic Process Control: Piping and Instrumentation diagrams
• BPR8 – Basic Process Control: Mechanical Connections
• BPR9 – Basic Process Control: Electrical Connections

Total Hours: 273
Total Cost: $2,934

Prices are subject to change.
Once assigned, courses/modules (even if unused) are non-transferable and non-refundable.

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