

On-Line Industrial Maintenance Technician Electrical Training Program

INTRODUCTION - \$60, 6 HRS	HOURS
REA5 – Study Skills	2
MPR1 – Maintenance Principles	2
TRB1 – Maintenance Troubleshooting: Procedures	2
BASIC MATH - \$80, 8 HRS	
MAT1 – Whole Numbers	2
MAT2 – Fractions	2
MAT3 – Decimals	2
MAT4 – Algebra	2
PRINT READING - \$187, 20 HRS	
TPC 102 – Reading Schematics & Symbols	20
SAFETY & HEALTH – \$120, 12 HRS	
PPE7 – Personal Protective Equipment: Don't Start Work Without It	2
LOT9 – Lockout / Tagout: Lightening in A Bottle	2
ELE5 – Electrical Safety: Beware the Bite	2
MAC0 – Machine Guarding: Safeguarding Your Future	2
HAZ2 – HazCom: In Sync with GHS	2
ELE0 – Arc Flash: Live to Tell	2
OSHA 10 HOUR GENERAL INDUSTRY - \$150, 10 HRS	
OSHA 10 HR General Industry	10
BASIC ELECTRICITY / ELECTRICAL MEASUREMENTS - \$160, 16 HRS	
ELS1 – Industrial Electricity Basic Principles	2
ACDC1 – Current	2
ACDC2 – Voltage	2
ACDC3 – Resistance	2
ACDC4 – Ohm's Law	2
ACDC5 – Magnetism	2
ACDC6 – Electrical Measurements	2
ACDC10 – AC Measurements	2
ELECTRICAL MEASURING INSTRUMENTS - \$187, 20 HRS	
TPC 204 – Measuring Instruments	20
DC CIRCUITS / FUNDAMENTALS - \$80, 8 HRS	
ACDC7 – DC Circuits	2
ADC2 – Ohm's Law & DC Circuits	2
ADC3 – Electronic Components and Magnetism	2
ADC4 – Electronic Schematics and Circuit Analysis	2
AC CIRCUITS / TRANSFORMERS - \$140, 14 HRS	
ELS2 – Industrial Electricity: Alternating Current	2
ELS3 – Industrial Electricity: Conductors	2
ACDC8 – Inductance & Capacitance	2
ACDC11 – Capacitive Circuits	2
ACDC12 – Inductive Circuits	2
ACDC 13 – Transformers	2
ACDC 14 – Tuned Circuits	2
MOTOR DRIVES - \$140, 14 HRS	
MTD1 – Motor Drive Identification	2
MTD2 – Open and Closed Loop Systems	2
MTD3 – Variable Speed AC Drives	2
MTD4 – Servo & Stepper Motors	2

MTD 5 – AC Motor Operation	2
MTD 6 – AC Drive Selection and Setup	2
INS6 – Operator Inspection: Motor Drive System Inspection	2
AC/DC EQUIPMENT & CONTROLS - \$140, 14 HRS	
ELS6 – Industrial Electricity: Generators and Motors	2
ELS7 – Industrial Electricity: AC Motor Control and Current Measurement	2
DCM1 – DC Motors: Basics and Parts of DC Motors	2
DCM2 – DC Motors: Wiring Diagrams and Troubleshooting	2
DCC1 – DC Motor Controllers – Controller Function and Operation	2
DCC2 – DC Motor Controllers – Maintenance and Troubleshooting	2
INS5 – Operator Inspection: Electrical Equipment Control System Inspection	2
MOTOR CONTROLS - \$180, 18 HRS	
MTR1 – Basic Motor Controls & Relays	2
MTR2 – Overload Protection Devices	2
MTR3 – Motor Controls: Time Delay Relays	2
MTR4 – Motor Controls: Schematics/Symbols	2
MTR5 – Motor Control: Schematics and Wiring Diagrams	2
MTR6 – Motor Controls: Starting Methods for Squirrel Cage Motors	2
MTR7 – Wye-Delta, Synchronous, & Wound Rotor Controls	2
MTR8 – Motor Controls: Installing / Troubleshooting	2
TRB3 – Troubleshooting: Motors and Motor Controls	2
POWER SUPPLIES - \$60, 6 HRS	
ELS4 – Industrial Electricity: Wiring	2
ELS5 – Industrial Electricity: Installation, Distribution, Lighting	2
TRB2 – Maintenance Troubleshooting: Power Distribution & Lighting Systems	2
CONTROL VALVES - \$120, 8 HRS	
CVA1 – Control Valves & Actuators: Basics and Functions	2
CVA2 – Types and Design	2
CVA3 – Fundamentals and Selection	2
CVA4 – Sizing and Installation	2
ELECTRONIC COMPONENTS & CIRCUITS - \$440, 38 HRS	
BEC1 – Basic Electronic Components: Types and Diagrams	2
BEC2 – Basic Electronic Controls and Applications	2
BEC3 – Basic Electronic Operation and Troubleshooting	2
ECI1 – Electronic Circuits: Basic Principles	2
ECI2 – Electronic Circuits: Characteristics and Operation	2
ECI3 – Electronic Circuits: Logic Fundamentals, Types & Application	2
EMS1 – Electronic Maintenance: Solid State Devices	2
EMS2 – Integrated Circuits and Op Amps	2
EMS3 – Sensor & Transducer Principles	2
EMS4 – Transmitters	2
EMS5 – Transducers	2
EMS6 – Controllers, Indicators, & Recorders	2
MEC1 – Mechanical Electrical Control: Introduction to Control Schematics	2
MEC2 – Creating Schematics	2
MEC3 – Electrical Lockout	2
MEC4 – Design and Troubleshooting	2
MEC5 – Energy Management	2
MEC6 – Electronic Controls	2
MEC7 – Responsive Systems	2
PROGRAMMABLE LOGIC CONTROLLERS (PLCS) - \$160, 16 HRS	
PLC1 – Fundamentals	2
PLC2 – Programming	2
PLC3 – Inputs and Outputs	2
PLC4 – Troubleshooting	2
PLC5 – Communications & Advanced Programming	2

RSX1 – Configuring Hardware and Software	2
RSX2 – Programming and Editing	2
RSX3 – Testing / Troubleshooting Functions	2
MEASUREMENT / INSTRUMENTATION - \$420, 28 HRS	
PME1 – Process Measurement Temperature 1: Thermometers and Thermocouples	2
PME2 – Process Measurement Temperature 2: Resistance & Radiation Devices	2
PME3 – Process Measurement Pressure 1: Manometers and Gages	2
PME4 – Process Measurement Pressure 2: Indicators and Transmitters	2
PME5 – Process Measurement Level 1: Measurement & Gages	2
PME6 – Process Measurement Level 2: Indicators and Transmitters	2
PME7 – Process Measurement Flow 1: Measurement Overview	2
PME8 – Process Measurement Flow 2: Flow Sensors	2
CTE1 – Primary Calibration Standards	2
CTE2 – Pneumatic Test Equipment	2
CTE3 – Electronic Test Equipment	2
CTE4 – Oscilloscopes	2
CTE5 – Instrument Errors	2
CTE6 – Instrument Calibration	2
PROCESS CONTROL / INSTRUMENTATION - \$270, 18 HRS	
BPR1 – Feedback Control	2
BPR2 – Process Control Modes	2
BPR3 – Process Characteristics	2
BPR4 – Process Variables	2
BPR5 – Instrumentation Symbols	2
BPR6 – Instrumentation Loop Diagrams	2
BPR7 – Piping and Instrumentation Diagrams	2
BPR8 – Mechanical Connections	2
BPR9 – Electrical Connections	2

Total Hours: 274 Total Cost: \$3,094 Prices subject to change.

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

For more information or to register, please contact:

Kent State University Regional Workforce Development Terry Theis at 330.308.7448 or ttheis1@kent.edu