



# Reading Area Community College

## Certificate of Completion

This is to certify that

*John Doe*

has successfully completed the

Advanced Manufacturing/  
Integrated Systems Technology Program

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*John DeVere*  
*Dean of Workforce Development*  
*& Community Education*

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*Date*

**AMIST Industrial Electrical Program (MET 130)**

- ZTEC 213 +                      Grade: \_\_\_\_\_
- ZTEC 326 = 4 credits, or    Grade: \_\_\_\_\_
- ZTEC 226 = 4 credits, or    Grade: \_\_\_\_\_
- ZTEC 227 = 4 credits        Grade: \_\_\_\_\_

**Electrical Control Circuits**

- Basic Electrical Circuits
- Electrical Measurements
- Circuit Analysis
- Inductance and Capacitance
- Combination Circuits

**Residential/Commercial Wiring**

- Electrical Wiring Techniques
- Wiring System Installation

**Electrical Motor Control**

- Introduction to Electrical Motor Control
- Manual Motor Control and Overload Protection
- Control Transformers
- Control Ladder Logic
- Control Relays and Motor Starters
- Introduction to Troubleshooting
- Systems Troubleshooting
- Reversing Motor Control
- Automatic Input Devices
- Basic Timer Control: On-Delay and Off Delay

**Electro-Fluid Power**

- Power Devices
- Control Relays
- Sequencing Control

**Electronic Sensors**

- Introduction to Electronic Sensors
- Operational Theory of Electronic Sensors

**Industrial Electrical Wiring 1 (LAPs 1-2)**

- Introduction to Electrical Control Wiring - 1
- Electrical Control System Wiring - 2

**Industrial Power Distribution**

- Introduction to Raceways
- Basic Conduit Bending - EMT
- Advanced Raceways
- Conductors, Disconnects & Overload Protection
- Conduit Sizing and Wire Pulling Techniques

**AMIST Industrial Mechanical Program (MET 120)**

- ZTEC 325 +                      Grade: \_\_\_\_\_
- ZTEC 327 = 5 credits, or    Grade: \_\_\_\_\_
- ZTEC 355 = 5 credits, or    Grade: \_\_\_\_\_
- ZTEC 356 = 5 credits        Grade: \_\_\_\_\_

**Hydraulics**

- Hydraulic Power Systems
- Basic Hydraulic Circuits
- Principles of Hydraulic Pressure and Flow
- Hydraulic Speed Control
- Pressure Control Circuits
- Hydraulic DCV Applications
- Hydraulic Cylinder Applications
- Hydraulic Relief Valve Operation
- Hydraulic Check Valve Applications

**Pneumatics**

- Pneumatic Power Supply
- Basic Pneumatic Circuits
- Principles of Pneumatic Pressure and Flow
- Pneumatic Speed Control Circuits

**Pneumatics Maintenance**

- Pneumatic Maintenance
- Introduction to the Pneumatic Construction System

**Piping Systems**

- Metal Piping Systems
- Metal Piping Installation
- Metal tubing Systems
- Hoses

**Hydraulic Troubleshooting**

- Introduction to Pressure Compensated Pumps
- Pressure Compensated Pump Performance
- Troubleshooting Hydraulic Pumps
- Troubleshooting Hydraulic Actuators
- Troubleshooting Hydraulic DCVs
- Troubleshooting Flow Control & Check Valves
- Troubleshooting Pressure Control Valves
- Troubleshooting Unloader & Counterbalance Valves
- Troubleshooting Hydraulic Systems

**Mechanical Drives 1**

- Introduction to Mechanical Drive Systems
- Key Fasteners
- Power Transmission Systems
- Introduction to V-Belt Drives
- Introduction to Chain Drives

**Mechanical Drives 2**

- Heavy Duty V-Belt Drives
- V-Belt Selection and Maintenance
- Heavy Duty Chain Drives

**AMIST Industrial PLC SLC500 Program (MET140 Part 1)**

- ZTEC 418 +                      Grade: \_\_\_\_\_
- ZTEC 423 = 2 credits, or    Grade: \_\_\_\_\_
- ZTEC 427 = 2 credits, or    Grade: \_\_\_\_\_
- ZTEC 428 = 2 credits        Grade: \_\_\_\_\_

**Programmable Logic Controller SLC500**

- Introduction to Programmable Controllers
- Basic PLC Programming
- PLC Motor Control
- Discrete I/O Interfacing
- Introduction to PLC Troubleshooting
- PLC Systems Troubleshooting
- Event Sequencing
- Application Development
- PLC Timer Instructions
- PLC Counter Instructions
- Program Control
- Math & Data Moves