

Mechanical Level 1

Basic Hydraulics – VB831-XC

- Hydraulic Power Systems
- Basic Hydraulic Circuits
- Principles of Hydraulic Pressure and Flow
- Hydraulic Speed Control
- Pressure and Control Circuits

Basic Pneumatics – VB780-AA

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

Intermediate Pneumatics – WB835-BA-E2

- Pneumatic DVC Applications
- Air Logic
- Pneumatic Maintenance

Advanced Pneumatics – WB838-XA

- Moving Loads Pneumatically
- Vacuum Systems
- Air Compressors

Pneumatic Construction – WB894-XA

- Intro to Pneumatic Construction

Pneumatic Troubleshooting – W19141-AA-E2

- Introduction to Pneumatic Troubleshooting
- Air Preparation Troubleshooting
- Troubleshooting Pneumatic Cylinders
- Motor and Rotary Actuator Troubleshooting
- Troubleshooting DCV and Flow Control Valves
- Troubleshooting Vacuum Systems
- Pneumatic System

Mechanical Drives 1 – WB502-XD

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

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Mechatronics – Level 1

84 LAP, 441 Hour

Mechanical Drives 2 – WB503-XD

- Heavy Duty V-Belt Drives
- V-Belt Selection & Maintenance
- Lubrication Concepts
- Heavy Duty Chain Drives

Piping Systems – EB526-XA

- Metal Piping Systems
- Metal Piping Installation
- Metal Tubing Systems
- Hoses
- Two-way Valves

Electrical Level 1

AC/DC Electrical Circuits – VB227-BD

- Basic Electrical Circuits
- Electrical Measurements
- Circuit Analysis
- Inductance and Capacitance
- Combination Circuits
- Transformers
- DC Theory

Residential Electrical Wiring/Electrical Fabrication – W12204-XA

- Introduction to Electrical Wiring
- Residential Wiring System Components
- Service Connections & Circuit Protection

Electric Wiring System – W17448-XB

- Introduction to Electrical Control Wiring
- Wiring Electrical Panel

Electrical Motor Control – V17901-CM

- 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

Electronic Sensors – WB837-XC

- Introduction to Electronic Sensors
- Electronic Sensor Applications

Electrical Control 1 – VB703-XB

- Control Logic
- Sequencing Control
- Timers and Advanced Systems

Electro-Fluid Power – WB861-XB

- Introduction to Electrical Control Systems
- Power Devices
- Sequencing Control

Electrical Power Distribution – W17471-XB

- Intro to Raceways
- Basic Conduit Bending
- Advanced Raceways
- Conductor, Disconnects and Overload Protection
- Conduit Sizing and Wire Pulling Techniques

Programmable Logic Controllers – W40660- FE

- Introduction to Programmable Controllers
- Basic PLC Programming
- PLC Motor Control
- Discrete I/O Interfacing
- PLC Timer Instructions
- PLC Counter Instructions
- Introduction to PLC Troubleshooting
- PLC Systems Troubleshooting
- Event Sequencing