DuPont Sustainable Solutions
LEARNING & DEVELOPMENT

Maintenance & Reliability eLearning Training Curriculum

Featuring COASTAL Content

ELECTRICAL MAINTENANCE

AC/DC Theory
- AC/DC Theory: Current
- AC/DC Theory: Voltage
- AC/DC Theory: Resistance
- AC/DC Theory: Ohm's Law
- AC/DC Theory: Magnetism
- AC/DC Theory: Electrical Measurements
- AC/DC Theory: DC Circuits
- AC/DC Theory: Inductance and Capacitance
- AC/DC Theory: Alternating Current
- AC/DC Theory: AC Measurements
- AC/DC Theory: Capacitive Circuits
- AC/DC Theory: Inductive Circuits
- AC/DC Theory: Transformers
- AC/DC Theory: Tuned Circuits

Applied DC Fundamentals
- Applied DC Fundamentals: Voltage, Resistance, Current, Ohm's Law & DC Circuits
- Applied DC Fundamentals: Ohm's Law & DC Circuits
- Applied DC Fundamentals: Electronic Components & Magnetism
- Applied DC Fundamentals: Electronic Schematics & Circuit Analysis

Basic Electronic Components & Their Measurement
- Basic Electronic Components & Their Measurement: Types & Diagrams
- Basic Electronic Components & Their Measurement: Controls & Application
- Basic Electronic Components & Their Measurement: Operation & Troubleshooting

DC Motors and DC Motor Controllers
- DC Motor Controllers: Controller Function & Operation
- DC Motor Controllers: Maintenance Procedures & Applications
- DC Motor: Maintenance & Troubleshooting
- DC Motor: Basics & Internal Parts

Industrial Electricity
- Electronic Circuits: Basic Principles
- Electronic Circuits: Characteristics & Operations
- Electronic Circuits: Logic Fundamentals, Types & Application

Mechanical Electrical Control Systems
- Mechanical Electrical Control Systems: Introduction to Control Schematics
- Mech Elec Control Sys: Creating Schematics
- Mech Elec Control Sys: Electrical Lockout
- Mech Elec Control Sys: Design & Troubleshooting
- Mech Elec Control Sys: Energy Management
- Mech Elec Control Sys: Electronic Controls
- Mech Elec Control Sys: Responsive Systems

Motor Drives
- Motor Drives: Identification
- Motor Drives: Open & Closed Loop Systems
- Motor Drives: Variable Speed AC Drives
- Motor Drives: Servo & Stepper Motors
- Motor Drives: AC Motor Operation
- Motor Drives: AC Drive Selection & Setup

Motor Controls
- Motor Controls: Basic Motor Controls & Relays
- Motor Controls: Overload Relays
- Motor Controls: Time Delay Relays
- Motor Controls: Schematic Symbols
- Motor Controls: Schematics & Wiring Diagrams
- Motor Controls: Starting Methods for Squirrel Cage Motors
- Motor Controls: Wye-Delta, Synchronous, & Wound Rotor Controls
- Motor Controls: Installing & Troubleshooting Control Systems

GENERAL MAINTENANCE

- Maintenance Principles
- Maintenance Troubleshooting: Troubleshooting Procedures
- Maintenance Troubleshooting: Power Distribution & Lighting Systems
- Maintenance Troubleshooting: Motors & Motor Controls
- Maintenance Troubleshooting: Pumps & Compressors
- Maintenance Troubleshooting: Hydraulic Circuits & HVAC

OPERATOR TRAINING

- Operator Inspection: Pneumatic System Inspection
- Operator Inspection: Vacuum System Inspection
- Operator Inspection: Air Compression System Inspection
- Operator Inspection: Fastener & Equipment Structures Inspection
- Operator Inspection: Electrical Equipment Control System Inspection
- Operator Inspection: Motor Drive System Inspection
- Operator Inspection: Belt Drive, Chain Drive & Gear Box Inspection
- Operator Inspection: Clutches & Brake Inspection
- Operator Inspection: Lubrication System Inspection

MECHANICAL MAINTENANCE

Hydraulics
- Hydraulics: Harnessing Hydraulic Power
- Hydraulics: The Hydraulic Circuit
- Hydraulics: The Hydraulic Pumps & Actuators
- Hydraulics: Control Valves
- Hydraulics: Hydraulic Fluid
- Hydraulics: Hydraulic Systems Safety & Maintenance
- Hydraulics: The Hydraulic Systems Troubleshooting

Hydraulic Power Systems & Troubleshooting
- Hydraulics Power Systems & Trobleshooting: Identification & Operation
- Hydraulics Power Systems & Trobleshooting: Troubleshooting Techniques

Industrial Hydraulics
- Industrial Hydraulics: Basic Principles & Application
- Industrial Hydraulics: Types & Concepts
- Industrial Hydraulics: Function & Operating Principles
- Industrial Hydraulics: Maintenance & Troubleshooting

Centrifugal Pumps
- Centrifugal Pumps: Design & Function
- Centrifugal Pumps: System Characteristics & Selection
- Centrifugal Pumps: Operation & Maintenance
- Centrifugal Pumps: Troubleshooting & Disassembly
- Centrifugal Pumps: Reassembling & Installation

Pneumatics
- Pneumatics: The Power Of Compressed Air
- Pneumatics: The Pneumatic Circuit
- Pneumatics: Processing Air
- Pneumatics: Using Compressed Air
- Pneumatics: Pneumatic Control Valves
- Pneumatics: Working Safely With Pneumatic Systems
- Pneumatics: Pneumatic System Maintenance
- Pneumatics: Troubleshooting Pneumatic System

Industrial Seals
- Industrial Seals: Types Materials & Properties
- Industrial Seals: Gaskets & Packings Inspection & Installation
- Industrial Seals: Mechanical Face Seals Troubleshooting & Installation

Machinery Lubrication
- Machinery Lubrication: Lubricating Oil Types, Properties & Handling
- Machinery Lubrication: Lubricating Oil Equipment & Procedures
- Machinery Lubrication: Lubricating Grease Types, Application & Equipment

Industrial Bearings
- Industrial Bearings: Application & Technology
- Industrial Bearings: Maintenance & Installation
- Industrial Bearings: Troubleshooting

Industrial Drives
- Industrial Drives: Belt Drives
- Industrial Drives: Chain Drives
- Industrial Drives: Complete Drive Packages
- Industrial Drives: Enclosed Drive Systems
- Industrial Drives: Gears & Gear Systems
- Industrial Drives: Shaft Joint and Coupling Devices

Clutches & Brakes
- Cluthes & Brakes: Types & Applications
- Cluthes & Brakes: Troubleshooting

Pipefitting
- Pipefitting: Introduction To Pipefitting
- Pipefitting: Piping Systems & Standards
- Pipefitting: Pipe Fittings & Joints
- Pipefitting: Measuring Pipe & Drawings
- Pipefitting: Offsets
- Pipefitting: Manual & Electric Threaded Pipe
- Pipefitting: Flanged Pipe
- Pipefitting: Plastic Pipe
- Pipefitting: Accessories & Specialty Equipment
- Pipefitting: Tubing
- Pipefitting: Hoses

HVAC&R
- HVAC&R: Air Handlers – Mechanical Systems
- HVAC&R: Air Handlers – Calibration
- HVAC&R: Chillers – Mechanical Components
- HVAC&R: Chillers – Leak Check & Electrical
- HVAC&R: Cooling Towers – Maint. & Troubleshooting
- HVAC&R: Condensers – Maint. & Troubleshooting
- HVAC&R: Complete System Troubleshooting

Steam Traps
- Steam Traps: Types, Principles, & Functions
- Steam Traps: Sizing, Installation, and Monitoring
- Steam Traps: Diagnostics & Trubleshooting

Boiler Operation & Control
- Boiler Operation & Control: Introduction to Boilers An Overview
- Boiler Operation & Control: Design & Construction
- Boiler Operation & Control: Feedwater & Steam
- Boiler Operation & Control: Fuel & Air
- Boiler Operation & Control: Boiler Operation

- Introduction to Ammonia Refrigeration

INSTRUMENTATION & CONTROL

Basic Process Control
- Basic Process Control: Feedback Control
- Basic Process Control: Process Control Modes
- Basic Process Control: Process Characteristics
- Basic Process Control: Process Variables
- Basic Process Control: Instrumentation Symbols
- Basic Process Control: Instrumentation Loop Diagrams
- Basic Process Control: Piping & Instrumentation Drawings
- Basic Process Control: Mechanical Connections
- Basic Process Control: Electrical Connections

Continous Process Control
- Continuous Process Control: Principles Of Continuous Control
- Continuous Process Control: Applications Of Heat Exchanger Control
- Continuous Process Control: Applications Of Distillation Control
- Continuous Process Control: Applications Of pH Control

Calibration & Test Equipment
- Calibration Test Equipment: Primary Calibration Standards
- Calibration Test Equipment: Pneumatic Test Equipment
- Calibration Test Equipment: Electronic Test Equipment
- Calibration Test Equipment: Oscilloscopes
- Calibration Test Equipment: Instrumentation Errors
- Calibration Test Equipment: Instrument Calibration

Control Valves & Actuators
- Control Valves & Actuators: Basics & Function
- Control Valves & Actuators: Types & Design
- Control Valves & Actuators: Fundamentals & Selection
- Control Valves & Actuators: Sizing & Installation

Electronic Maintenance
- Electronic Maintenance: Solid-State Devices
- Electronic Maintenance: Integrated Circuits & Op Amps
- Electronic Maintenance: Sensor & Transducer Principles
- Electronic Maintenance: Transmitters
- Electronic Maintenance: Transducers
- Electronic Maintenance: Controllers, Indicators & Recorders
- Electronic Maintenance: Tuning
- Electronic Maintenance: Spectroscopic Analyzers
- Electronic Maintenance: Sampling Systems & Gas Chromatograph Valves
- Electronic Maintenance: Gas Chromatograph Ovens & Controllers
- Electronic Maintenance: Electrochemical Analyzers
- Electronic Maintenance: Instrument Loop Troubleshooting

ISA PREMIUM

Process Measurement
- Process Measurement: Temperature 1 – Thermometers & Thermocouples
- Process Measurement: Temperature 2 – Resistance & Radiation Devices
- Process Measurement: Pressure 1 Manometers & Gages
- Process Measurement: Pressure 2 Indicators & Transmitters
- Process Measurement: Level 1 Measurement & Gages
- Process Measurement: Level 2 Indicators & Transmitters
- Process Measurement: Flow 1 Measurement Overview
- Process Measurement: Flow 2 Flow Sensors

ISA PREMIUM

ControlLogix
- ControlLogix: Introduction To The ControlLogix PLC Family
- ControlLogix: Introduction To RSLogix 5000 Software
- ControlLogix: Creating & Using Tags & The Program Editor
- ControlLogix: Basic Instructions
- ControlLogix: Advanced Programming & Analog Devices
- ControlLogix: PLC Troubleshooting

Using RSLogix™
- RSLogix™: Configuring Hardware & Software
- RSLogix™: Programming & Editing
- RSLogix™: Testing & Troubleshooting

Smart Digital Instrumentation
- Smart Digital Instrumentation: Understanding HART Protocol
- Smart Digital Instrumentation: Applications Of Smart Field Devices
- Smart Digital Instrumentation: Configuring, Calibrating & Testing HART Smart Field Devices
- Smart Digital Instrumentation: FOUNDATION™ Fieldbus

Fielbus
- Fieldbus: Fieldbus Curriculum Overview
- Fieldbus: The Road To Fieldbus
- Fieldbus: Fieldbus Wiring
- Fieldbus: Fieldbus Devices
- Fieldbus: Introduction to Configuration
- Fieldbus: Introduction to Control Strategy
- Fieldbus: Control Strategy
- Fieldbus: Data Flow & Communications
- Fieldbus: Fieldbus Calibration
- Fieldbus: OPC
- Fieldbus: Introduction To Troubleshooting
- Fieldbus: Troubleshooting
- Fieldbus: Fieldbus Maintenance
- Fieldbus: Maintenance Exercises

FIELDBUS CENTER PREMIUM

MACHINE TECHNOLOGY

Basic Machine Lathe
- Basic Engine Lathe: Identification of Parts & Care Of The Engine Lathe
- Basic Engine Lathe: Engine Lathe Accessories
- Basic Engine Lathe: Cutting Speeds & Feeds For Lathe-Ferrous, Non-Ferrous Plastics
- Basic Engine Lathe: Grinding a Right-Hand Roughing Tool
- Basic Engine Lathe: Grinding a Round-Nose Finishing Tool
- Basic Engine Lathe: Mounting & Truing Work in the 4-Jaw, Independent Chuck
- Basic Engine Lathe: Three Methods of Facing Work to Length
- Basic Engine Lathe: Straight Turning Work of Two Diameters
- Basic Engine Lathe: Straight Turning Between Centers
- Basic Engine Lathe: Drilling, Boring, & Reaming Work
- Basic Engine Lathe: Turning A Radius
- Basic Engine Lathe: Taper Turning On The Lathe
- Basic Engine Lathe: Filing & Polishing On The Engine Lathe
- Basic Engine Lathe: Knurling On The Lathe

Computer Numerical Control
- CNC: Introduction to Computer Numerical Control
- CNC: Preparing For Programming
- CNC: Absolute & Incremental Positioning
- CNC: One & Two-Axis Linear Milling
- CNC: Three-Axis Linear & Circular Milling
- CNC: Complete Milling Programs
- CNC: Drilling, Boring, and Spot-Facing
- CNC: Subroutines
- CNC: Looping
- CNC: Special Cycles
- CNC: Translation
- CNC: Polar Coordinate Programming
- CNC: Scaling
- CNC: Multi-Quadrant Interpolation & Rotation
- CNC: Cutter Radius Compensation

Basic Machine Technology
- Basic Machine Technology: Safety Procedures & Guidelines
- Basic Machine Technology: Hand Tools & their Uses
- Basic Machine Technology: The Use of Measuring Tools
- Basic Machine Technology: The Vertical Milling Machine
- Basic Machine Technology: Vernier Caliper & Vernier Protractor
- Basic Machine Technology: The Pedestal Grinder
- Basic Machine Technology: Sharpening Drill Bits By Hand & Machine
- Basic Machine Technology: Drill Presses Sensitive & Radial Arm
- Basic Machine Technology: Drill Press Operations
- Basic Machine Technology: Vertical Band Saws Parts, Accesories & Operation

PREDICTIVE MAINTENANCE

Machinery Oil Analysis
- Machinery Oil Analysis: Fundamentals & Methods
- Machinery Oil Analysis: Strategies Options & Testing
- Machinery Oil Analysis: Establishing an Effective Program

Thermography
- Thermography: Basic Operation
- Thermography: Operating Procedures & Implementation
- Thermography: Practical Application

Ultrasonics
- Ultrasonics: Basic Principles
- Ultrasonics: Leak Detection
- Ultrasonics: Mechanical & Electrical Inspection

Advanced Vibration: AC Induction Motors
- Advanced Vibration: AC Induction Motors Part I
- Advanced Vibration: AC Induction Motors Part II

Vibration Analysis
- Vibration Analysis: Predictive Maint & Mach Vibration
- Vibration Analysis: Machine Vibration, Basic Theory
- Vibration Analysis: Preparing for Data Collection
- Vibration Analysis: The Data Processing System
- Vibration Analysis: Data Collection
- Vibration Analysis: Data Analysis

ISA PREMIUM

DRESSER-RAND® EQUIPMENT-SPECIFIC: RECIPROCATING PRODUCTS

- Dresser-Rand: Engine – Major Components
- Dresser-Rand: Engine – Four-Cycle Theory
- Dresser-Rand: Engine – Pre-Ignition & Detonation
- Dresser-Rand: Engine – Balancing Firing Pressures
- Dresser-Rand: Recip – Compressor Major Components
- Dresser-Rand: Recip – Compressor Theory
- Dresser-Rand: Recip – Compressor Piston End-Clearance
- Dresser-Rand: Recip – Compressor Rod Run-out
- Dresser-Rand: Reciprocating Compressor Frame Lubrication System
- Dresser-Rand: Recip/Engine – Crankshaft Web Deflection
- Dresser-Rand: Recip – Compressor Rod Packing Fundamentals
- Dresser-Rand: Recip – Compressor Rod Packing Reconditioning
- Dresser-Rand: Recip – Compressor Wedge Ring Packing
- Dresser-Rand: Recip – Compressor Divider Block Cylinder & Packing Lubrication
- Dresser-Rand: Recip – Compressor Pump to Point Cylinder & Packing Lubrication
- Dresser-Rand: Recip – Compressor Set Screw Type Valve Cover
- Dresser-Rand: Bolt Torque
- Dresser-Rand: Recip – Compressor Crosshead & Piston Supernut
- Dresser-Rand: Steam – Turbine Major Components
- Dresser-Rand: Steam – Turbine Operation
- Dresser-Rand: Steam – Turbine Overspeed Trip Systems
- Dresser-Rand: Centrifugal – Compressor Types
- Dresser-Rand: Centrifugal – Compressor Surge

DRESSER-RAND PREMIUM