

The Facilities Maintenance Series is intended to provide basic, intermediate, and advanced training on processes, procedures, and equipment for both new and experienced employees.

Basic Plumbing Repairs

Clearing Drains

- Floor, Sink, and Lavatory Drains

Faucet Repair

- Noisy Faucets
- Ball-Type Single-Lever and Cartridge-Type Faucets

Pipe Repair & Replacement

- Leaking Pipes
- Leaking Toilets/Urinals

Electrical Maintenance

Basic Electrical Theory

- Electrical Concepts
- Electrical Circuits

Electrical Safety Requirements of the Workplace I

- Basic Electrical Safety and Electrical Shock Hazards
- Safety References
- Emergency Response

Electrical Safety Requirements of the Workplace II

- Personal Protective Equipment
- Lockout/Tagout

Grounding Practices

- Proper Grounding
- Installation and Electrodes
- Common Grounding Faults

Confined Spaces

- Confined Space Hazards
- Safety in Confined Spaces

Overview of Electrical Systems

- How the Power Grid Works
- Facility Power Distribution Systems and Equipment

Installation and Repair of Circuits I

- Terminology
- Conductors
- Circuit Breaker Panels and Load Centers
- Conduits and Raceways

Installation and Repair of Circuits II

- Outlet and Lighting Circuits
- Switching Circuits
- Feeder vs. Branch Circuits

Electrical Tools and Test Equipment

- Common Electrician's Tools
- Standard Test Equipment

Circuit Protection Devices

- Circuit Breakers
- Safety Switches
- Fuse Types and Selection Requirements

Electrical Control Circuits

- Control Circuit Diagrams
- Control Circuit Logic

Motors I

- Motor Terminology
- Types of Motors and Functions
- Common Motor Control Circuits

Motors II

- AC Motor Fundamentals
- DC Motor Fundamentals
- Motor Troubleshooting and Diagnostic Techniques

Facility Power and Control Transformers I

- Types of Transformers and Functions
- Transformer Connections

Facility Power and Control Transformers II

- Testing and Replacement of Transformers
- Transformer Nameplate Data

Overhead Door Controls

- Overhead Door System Components
- Manual Operation
- Lubrication
- Limit Adjustment

Basic Carpentry Maintenance and Locksmithing

Basic Carpentry Maintenance and Locksmithing

- Drywall and Door Repair
- Locks

HVAC

HVAC Fundamentals

- HVAC Overview
- HVAC Systems
- HVAC Equipment

Basic HVAC Maintenance

- Refrigeration Cycle
- Window Mounted Units
- HVAC Systems

Chemical Storage

Chemical Storage

- Safe Chemical Storage
- Basic Chemical Segregation
- Storage Time Limits

Basic Masonry

Basic Masonry

- Terminology and Tools
- Repairs

Basic Preventive Maintenance

Preventive Maintenance

- Monitoring
- Planning
- Scheduling

Practices and Procedures I

- Grounds

- Interior/Exterior Lighting and Electrical
- Interior and Exterior

Practices and Procedures II

- HVAC
- Vehicles

Boilers and Controls

Boiler Types and Classifications

- Steel and Cast Iron Boilers
- Steam and Condensate Boiler System
- Hydronic (Hot Water) Boiler System

Boiler System

- Major Components
- Boiler Room Terminology
- Valves and Identification

Boiler Blowdown

- Types of Blowdown
- Blowdown Procedure
- Water Quality

Combustion Fundamentals

- Combustion Process
- Physical Combustion Requirements
- Burners and Controls

Boiler Operation

- System Startup
- Steam and Hot Water Control Settings
- Operation
- System Shutdown

Safety Valves, Safety Relief Valves, and Temperature/Pressure Relief Valves

- Valve Identification and Terminology
- Valve Applications

Boiler System Controls

- Common Controls

Boiler Management Control Systems

- Circuit and Interlock Controls
- Sequence of Operation
- Burner Shutdown
- Flame Loss Sequence
- Troubleshooting
- Basic Flame Safeguard System

Welding

Properties and Uses of Metals

- Metal Properties
- Mechanical Properties
- Metal Types
- Metal Identification

Basic Heat Treatment I

- Heat-Treating Theory
- Stages of Heat Treatment
- Types of Heat Treatment

Basic Heat Treatment II

- Quenching Media

- Heat Colors for Steel

Welding Fundamentals I

- Welding Terminology
- Drawings
- Safety
- Expansion and Contraction

Welding Fundamentals II

- Welding Procedures
- Welding Processes
- Welding Joint Design
- Welding Positions

Soldering, Brazing, Braze Welding, and Wearfacing

- Soldering
- Brazing and Braze Welding
- Wearfacing Steel and Cast Iron Boilers