

Facilities Management

Library	Course Code	Course Name	Description and Length (in minutes) 3-18-24	
General Maintenance, Mill Wright, Operator Performed Maintenance, Emergency Response Planning, Environmental, Instrument Use & Care, Wood Shop Safety, Laboratory Safety, Auto Shop Safety, Auto Shop Tools & Procedures & Metal Shop Safety				
General Maintenance	351MGUARD	Machine Guarding	Machine Guarding introduces learners to machine guarding, including the types, uses, implementation, and safety considerations regarding machine guards.	30 minutes
General Maintenance	352AERIAL	Aerial Lifts	Aerial Lifts explains the hazards of aerial lifts, fall protection techniques, safety factors, and proper inspection and operation.	35 minutes
General Maintenance	357OPCOM	Crane Operator Communication	Crane Operator Communication identifies the qualifications and responsibilities of a signal person. It also illustrates necessary voice and hand signals during crane operation.	30 minutes
General Maintenance	381TOOLS	Introduction to Hand Tools: Part 1	Introduction to Hand Tools: Part 1 is designed to teach you about different types of hand tools, how they work, and safety precautions when using them.	35 minutes
General Maintenance	382TOOLS	Introduction to Hand Tools: Part 2	Introduction to Hand Tools: Part 2 discusses the different types of hand tools, how they work, and safety precautions when using them.	25 minutes
General Maintenance	383POWER	Power Tools	Power Tools is designed to teach you about different types of power tools, how they work, and safety precautions.	50 minutes
General Maintenance	384RIGG	Basic Rigging	Basic Rigging identifies the basic hardware used in rigging and maintenance, safe rigging operations, and basic crane hand signals.	45 minutes
General Maintenance	385SLING	Slings	Slings examines the characteristics, advantages, and limitations of basic slings, as well as the use, storage, and maintenance of slings.	30 minutes

General Maintenance	386SCAF	Scaffolds	Scaffolds discusses the two main types of scaffolds and their major components, OSHA's general scaffold specifications, safety factors for scaffold inspection, and general scaffold safety.	35 minutes
General Maintenance	417VLVS	Control Valves and Actuators	Control Valves and Actuators identify the basic types of valves and actuators and discuss applications for each.	35 minutes
General Maintenance	432LEAK	Pressure Leak Testing Methods for Piping/Tubing	Pressure Leak Testing Methods of Piping/Tubing offers an overview of pressure leak test methods focusing on hydrostatic and pneumatic leak testing.	15 minutes
General Maintenance	448CNTRL	Controller Basics	Controller Basics discusses process variables, process control, controllers, controller tuning, and control systems in petrochemical facilities.	35 minutes
General Maintenance	704THRED	Fabrication of Threaded Pipe	Fabrication of Threaded Pipe covers threaded pipe, its designations, connectors, common tools, quality work practices, and the proper ways to calculate installation.	35 minutes
General Maintenance	712PIPE	Pipe Hangers and Supports	Pipe Hangers and Supports explores the differences, types, and correct use of industrial pipe hangers and supports.	25 minutes
General Maintenance	715VALVE	Valve Installation and Maintenance	Valve Installation and Maintenance examines nine general types of valves, including their operation, installation, inspection, and maintenance.	50 minutes
General Maintenance	723TRAPS	Introduction to Steam Traps	Introduction to Steam Traps discusses types of steam traps, steam trap surveys, and troubleshooting steam trap malfunctions.	50 minutes
General Maintenance	724TRAPS	Thermostatic Steam Traps	Thermostatic Steam Traps describes and explains the operation of the following types of thermostatic steam traps: bellows, dual-range, bimetallic, and liquid expansion.	20 minutes
General Maintenance	725TRAPS	Mechanical Steam Traps	Mechanical Steam Traps discusses the operation of float and inverted bucket traps and their associated maintenance problems.	50 minutes
General Maintenance	726TRAPS	Thermodynamic Steam Traps	Thermodynamic Steam Traps discusses thermodynamic steam trap basics as well as disc and piston steam traps and their maintenance.	50 minutes
Millwright				
Millwright	108GAS	Cutting and Fitting Gaskets	Cutting and Fitting Gaskets examines leak prevention, gasket groups, classifications, installation and removal procedures, and gasket fabrication.	25 minutes

Millwright	109HYDRA	Hydraulics and Pneumatics - Part 1	Hydraulics and Pneumatics - Part 1 examines hydraulics and pneumatics, fluid mechanics, Pascal's Law, Boyle's Law, and the mercury column experiment.	40 minutes
Millwright	110HYDRA	Hydraulics and Pneumatics - Part 2	Hydraulics and Pneumatics - Part 2 takes a look at cylinder types and operation, hydraulic pumps, discharging, sewerage, and recirculation.	20 minutes
Millwright	111HYDRA	Hydraulics and Pneumatics - Part 3	Hydraulics and Pneumatics - Part 3 examines valve types and their purposes, cylinder packing procedures, and accumulators.	30 minutes
Millwright	112LUBE	Lubrication	Lubrication addresses the purposes of lubrication, viscosity, types of lubricants and lubrication systems, SAE ratings, the lubrication chart, and safety precautions.	25 minutes
Millwright	113INTRO	Introduction to Bearings	Introduction to Bearings addresses the types, uses, and functions of bearings, dissimilar and similar metals, bearing composition, and how viscosity and lubrication effect bearings.	25 minutes
Millwright	114BEAR	Bearing Types and Maintenance	Bearing Types and Maintenance examines bearing types, anti-friction bearings, metric and numbering systems, transmission units, pillow blocks, flange bearing units, clearance, relining, operating temperatures, oil contamination, and bearing cleaning.	30 minutes
Millwright	115BRGLB	Introduction to Bearing Lubrication	Introduction to Bearing Lubrication addresses lubricant functions, pump bearing life, pump bearing lubrication methods, and more.	20 minutes
Millwright	116BRGLB	Greased Bearing and Oil Mist Lubrication	Greased Bearing and Oil Mist Lubrication examines reasons and procedures for re-greasing bearings and discusses oil mist systems and their maintenance.	40 minutes
Millwright	117PACK	Compression Packings	Compression Packings addresses the use and types of compression packings, their materials, leakage control, removal and inspection, installation, reversal, size, and additional rings.	35 minutes
Millwright	118PACK	Automatic Packings	Automatic Packings examines the purposes of lip type and squeeze-type packings, as well as O-rings, X-rings, and delta rings.	25 minutes
Millwright	120BELT	V-Belts and Positive Drive Belts	V-Belts and Positive Drive Belts examine belt drive styles, code marking, belt storage, formulas, drive alignment, installation, tension, maintenance, and belt numbering system.	60 minutes

Millwright	122SEALS	Mechanical Seals	Mechanical Seals explores the types, uses, and parts of a mechanical seal, and how to properly install one.	40 minutes
Millwright	125CHAIN	Introduction to Chain Drives	Introduction to Chain Drives explores the parts, pitch, width, diameter, and identification of chain drives. Other topics include sprocket types and the inspection, installation, and maintenance of chain drives.	25 minutes
Millwright	126CHAIN	Installation & Maintenance of Chain Drives	Installation and Maintenance of Chain Drives examines the installation of roller and silent chains, measuring devices, alignment of sprocket wheels, shaft and chain adjustments, and lubrication and maintenance.	25 minutes
Millwright	129PUMPS	Introduction to Pumps - Part 1	Introduction to Pumps - Part 1 addresses proper roller installation, use of measuring devices and detachers, sprocket wheel alignment, shaft and chain adjustment, and the installation, lubrication, and maintenance of silent chains.	25 minutes
Millwright	130PUMPS	Introduction to Pumps - Part 2	Introduction to Pumps - Part 2 examines pressure, pressure and liquid height formulas, types of heads, and various pressure and pump calculations.	35 minutes
Millwright	131PUMPS	Introduction to Pumps - Part 3	Introduction to Pumps - Part 3 explores different ways pressure is depicted, net positive suction head, available and required NPSH, and troubleshooting indicators and causes.	25 minutes
Millwright	133ALIGN	Shaft Alignment	Shaft Alignment examines shaft misalignment, couplings, coupling alignment methods and adjustments, and the effect of temperature during installation and operation.	35 minutes
Millwright	134SEAL	Pump Seals and Seal Flush	Pump Seals and Seal Flush addresses the components and types of seals, seal arrangements, API flush plans, and mechanical seal maintenance techniques.	45 minutes
Millwright	135PUMP	Positive Displacement Pumps	Positive Displacement Pumps examines situations where positive pumps are used, types of positive displacement pumps, the principle of displacement, positive displacement pump operation, cavitation, and excessive discharge pressure.	40 minutes
Millwright	136CENTR	Centrifugal Pumps	Centrifugal Pumps explores key components of centrifugal pumps, types of centrifugal pumps, pump standards, and pump maintenance techniques.	40 minutes

Operator Performed Maintenance				
Operator-Performed Maintenance	301ADLUB	Natural Feed Lubrication Systems: Maintenance	Natural Feed Lubrication Systems: Maintenance explains how to maintain natural feed lubrication systems that utilize bottle oilers and how to use a grease gun.	10 minutes
Operator-Performed Maintenance	302FLTR	Filter Maintenance and Line Cleaning	Filter Maintenance and Line Cleaning describes the recommended preventive maintenance of industrial filters and strainers and explains certain line-cleaning methods.	15 minutes
Operator-Performed Maintenance	303FLCNT	Connecting Flanges	Connecting Flanges describes the types of flanges, types of flange faces, relevant pressure classes, gaskets, connection procedure, torquing procedure, and follow-up leak testing.	10 minutes
Operator-Performed Maintenance	304FLBL	Installing Blinds	Installing Blinds explains various types of blinds, how to safely install each type of blind, and precautions for line breaking.	10 minutes
Operator-Performed Maintenance	305FLLK	Stopping Pipe and Flange Leaks	Stopping Pipe and Flange Leaks explains how to repair flange leaks and how to make temporary repairs to pipe wall leaks and pinhole leaks with the use of mechanical clamps.	10 minutes
Operator-Performed Maintenance	306GAUGE	Gauge Glass Maintenance	Gauge Glass Maintenance describes the proper cleaning procedures for gauge glass devices.	10 minutes
Operator-Performed Maintenance	307LUBEF	Friction and Lubrication Basics	Friction and Lubrication Basics provides an overview of friction and lubrication types and terminology as they pertain to equipment and machinery.	15 minutes
Operator-Performed Maintenance	308LUBEM	Natural-Feed Lubrication Systems: Monitoring	Natural-Feed Lubrication Systems: Monitoring explains how to monitor natural-feed lubrication systems that utilize a bottle oilers.	15 minutes
Operator-Performed Maintenance	309MAN	Manways	309MAN Manways explains manway designs, safety precautions for removing a manway, and how to safely reinstall manways.	5 minutes
Operator-Performed Maintenance	310NATFD	Natural-Feed Lubrication Systems	Natural-Feed Lubrication Systems describes the five types of natural-feed lubrication systems, including ring, bath, splash, constant-level, and wick systems.	10 minutes
Operator-Performed Maintenance	311GAUGE	Replacing Pressure and Temperature Gauges	Replacing Pressure and Temperature Gauges explains the procedure for removing and replacing pressure and temperature gauges and lists special precautions.	10 minutes

Operator-Performed Maintenance	312PIPEF	Pipe Fitting Basics	Pipe Fitting Basics explains the use of fittings in piping system, methods of attaching fittings to pipe, various pipe fittings, and each fitting's function.	10 minutes
Operator-Performed Maintenance	313PIPEI	Pipe Materials of Construction	Pipe Materials of Construction discusses the different types of materials used in piping systems, as well as their advantages and disadvantages.	10 minutes
Operator-Performed Maintenance	314TUBEC	Tube Cutting	Tube Cutting explains tubing cutters and how to use them. It also describes alternate methods of cutting tubing as well as cleaning and deburring methods.	10 minutes
Operator-Performed Maintenance	315THRED	Small Threaded Pipe Basics	Small Threaded Pipe Basics explains how to measure and calculate pipe lengths, cut and deburr pipe, thread pipe and install it, and then check for leaks.	10 minutes
Operator-Performed Maintenance	316TOOLS	Common Tools	Common Tools examines the types, purposes, and use of common tools operators use during maintenance.	25 minutes
Operator-Performed Maintenance	317TUBEF	Tube Fittings	Tube Fittings describe flare tube fittings and ferrule tube fittings. It also covers connecting ferrule fittings and checking for leaks.	5 minutes
Operator-Performed Maintenance	318TUBEI	Tube Installation	Tube Installation explains tube bending, good seals for tube fittings, and how to check for tube fitting leaks.	5 minutes
Operator-Performed Maintenance	319VLVID	Valve Identification	Valve Identification explains the different types of valves, the main components, and their purpose in piping systems.	10 minutes
Operator-Performed Maintenance	320VLVIN	Installing Valves	Installing Valves explains the process of installing valves, including isolating and removing the old valve, installing a new valve, and checking for leaks.	10 minutes
Operator-Performed Maintenance	321VLVLK	Stopping Valve Leaks	Stopping Valve Leaks describes common areas for valve leaks, methods for stopping leaks, and the importance of lubrication.	10 minutes
Operator-Performed Maintenance	322WREN	Wrenches	Wrenches describe some of the common types of wrenches used for maintenance and their uses.	10 minutes
EMERGENCY RESPONSE AND PLANNING				
Pipeline Operator Qualification - DOT	850	Public Awareness	<i>Public Awareness</i> addresses public awareness program requirements for the natural gas and hazardous liquids pipeline industries, including types of stakeholder audiences, message content, message delivery frequency, and program evaluation. (35 min)	35 minutes

Pipeline Operator Qualification - DOT	853	Contractor Safety	<i>Contractor Safety</i> examines basic safety principles for gas and hazardous liquids pipeline workers. Course topics include guidelines, emergency procedures, communication, recordkeeping, and equipment and operations. (20 min)	20 minutes
Pipeline Operator Qualification - DOT	854	Accident/Incident Investigation Overview	<i>Accident/Incident Investigation Overview</i> discusses the general steps necessary to investigate an accident or incident involving natural gas and hazardous liquids pipeline systems. (30 min)	30 minutes
Pipeline Operator Qualification - DOT	850	Public Awareness	<i>Public Awareness</i> addresses public awareness program requirements for the natural gas and hazardous liquids	35 minutes
Pipeline Operator Qualification - ER	102	Emergency Plans & Public Contractor Education	<i>Emergency Plans & Public Contractor Education</i> addresses emergency action plans and reviews damage prevention programs, including one-call systems, public and contractor education about gas pipelines, and response procedures for pipeline damage from an outside force. (100 min)	100 minutes
Pipeline Operator Qualification	ER1301	Emergency Response Plan for Natural Gas Pipelines	<i>Emergency Response Plan for Natural Gas Pipelines</i> explores the components of respective emergency response plans utilized by the natural gas and liquefied natural gas pipeline industries. (25 min)	25 minutes
Pipeline Operator Qualification	ER1302	Working With the Media During an Emergency	<i>Working With the Media During an Emergency</i> addresses appropriate interview protocols with the news media and emergency response officials at the scene of a pipeline emergency. (35 min)	35 minutes
Pipeline Operator Qualification	ER1304	Pandemic Preparedness: What Every Employee Should Know	<i>Pandemic Preparedness: What Every Employee Should Know</i> describes how pipeline employees and their workplaces can prepare for a pandemic, including protecting themselves and adjusting working arrangements to deal with a reduced workforce. (30 min)	30 minutes
ENVIRONMENTAL				
Pipeline Operator Qualification - Env	855	Introduction to Waste Management and Minimization	<i>Introduction to Waste Management and Minimization</i> provides general information about the management of solid waste, specifically hazardous waste as defined in RCRA Subtitle C, and an overview of the waste minimization hierarchy. (50 min)	50 minutes

Pipeline Operator Qualification - Env	856	Air Permitting for Supervisors	<i>Air Permitting for Supervisors</i> is a general overview course that discusses the purpose of air permitting, federal and state operating permits, stack and fugitive emissions, emissions issues, agency inspections, inspection preparation, and responding to Notices of Violation. (25 min)	25 minutes
Pipeline Operator Qualification - Env	8561	Air Permitting Awareness	<i>Air Permitting Awareness</i> is a general overview course that examines the purpose of air permitting, Title V operating permits, stack and fugitive emissions, emissions issues, agency inspections, inspection preparation, and responding to a citation. (20 min)	20 minutes
Pipeline Operator Qualification - Env	857	Environmental Awareness	<i>Environmental Awareness</i> is designed to make all employees aware of the types of environmental concerns that pipeline operators must address, including regulatory requirements. (30 min)	30 minutes
INSTRUMENT USE AND CARE				
Pipeline Operator Qualification - I	903	Using the DTEX® Odorant Detection Instrument	<i>Using the DTEX® Odorant Detection Instrument</i> teaches the learner about the DTEX DX1000G/L odorant detection instrument system and how to conduct an odor concentration test. (30 min)	30 minutes
Pipeline Operator Qualification - I	904	Using the Heath ODORATOR®	<i>Using the Heath ODORATOR®</i> explores how this odorant detection instrument works, explains how to operate and troubleshoot the instrument, and provides additional information to help the user skillfully operate the instrument. (15 min)	15 minutes
Pipeline Operator Qualification - I	905	Using the Heath Gasurveyor® 3-500	<i>Using the Heath Gasurveyor® 3-500</i> , examine the components, range of operation, and key functions of this combustible gas indicator and explain how to operate the instrument. (30 min)	30 minutes
Pipeline Operator Qualification - I	907	Using the Radiodetection Pipe Locator	<i>Using the Radiodetection Pipe Locator</i> teaches techniques for locating buried pipelines and cables using the radiodetection pipe locator. The course also explains how to operate the radiodetection receiver and transmitter. Tips for using the radiodetection locator are also provided. (75 min)	75 minutes

Pipeline Operator Qualification - I	908	Using the Metrotech Pipe Locator	<i>The Metrotech Pipe Locator</i> explains how to use this pipe-locating instrument, including the three primary locating methods: direct connection, inductive coupling, and the inductive method. Also examined are instrument checkout procedures, tracing techniques, and maintenance requirements. (60 min)	60 minutes
Pipeline Operator Qualification - I	909	Ditch Witch® Pipe Locators	<i>Ditch Witch® Pipe Locators</i> discusses the control features and functions of the Ditch Witch® Pipe Locator receiver and transmitter, the specific operation and line locating methods, and the abnormal operating conditions (AOCs) that may be encountered while performing a line location. (40 min)	40 minutes
Pipeline Operator Qualification - I	910	Using a Digital Multimeter	<i>Using a Digital Multimeter</i> is an introduction to the metric system, the concepts of electricity, and how to use a multimeter to measure resistance, voltage, and amperage. (45 min)	45 minutes
Vocational & Technical Training				
Vocational/Technical	900WOOD	Woodshop Safety	Woodshop Safety explores safe conduct in the woodshop, personal protective equipment, shop equipment safety, and basic fire safety.	40 minutes
Vocational/Technical	901LAB	Laboratory Safety	Laboratory Safety explores how to set up an EHS policy, create and state lab procedures and safety rules, and point out safety rules and practices when working.	25 minutes
Vocational/Technical	902AUTO	Introduction to Auto Shop Safety	Introduction to Auto Shop Safety explores safe practices and procedures in an automotive technology laboratory, personal protective equipment, proper lifting techniques, and fire extinguisher types and uses.	45 minutes
Vocational/Technical	903AUTO	Auto Shop Chemical Safety	Auto Shop Chemical Safety addresses the storage and disposal of chemicals and lubricants and the signs and dangers of exposure to carbon monoxide, oxides of nitrogen, hydrocarbons, refrigerant, and gasoline.	25 minutes
Vocational/Technical	904AUTO	Auto Shop Safety Procedures	Auto Shop Safety Procedures addresses jump-starting and lifting or jacking up a vehicle.	20 minutes
Vocational/Technical	905AUTO	Auto Shop Tool Safety	Auto Shop Tool Safety explores common hand and power tools and the safe use of hammers, screwdrivers, and other hand and power tools.	25 minutes

Vocational/Technical	906METAL	Metal Shop Safety	Metal Shop Safety addresses specific hazards of metal shop, proper safety equipment and practices, and injury response.	50 minutes