

Module ID	Module Title	Training Hours	Academic Credit
00100	Build Your Future in Construction	2.5	0.16666667
00101	Basic Safety	12.5	0.83333333
00101	Basic Safety	15	1
00102	Introduction to Construction Math	10	0.66666667
00103	Introduction to Hand Tools	12.5	0.83333333
00104	Introduction to Power Tools	10	0.66666667
00105	Introduction to Construction Drawings	10	0.66666667
00106	Introduction to Basic Rigging	7.5	0.5
00107	Basic Communication Skills	7.5	0.5
00108	Basic Employability Skills	7.5	0.5
00109	Introduction to Materials Handling	5	0.33333333
02101	Introduction to the Plumbing Profession	5	0.33333333
02102	Plumbing Safety	22.5	1.5
02103	Tools of the Plumbing Trade	10	0.66666667
02104	Introduction to Plumbing Math	12.5	0.83333333
02105	Introduction to Plumbing Drawings	17.5	1.16666667
02106	Plastic Pipe and Fittings	12.5	0.83333333
02107	Copper Tube and Fittings	12.5	0.83333333
02108	Cast-Iron Pipe and Fittings	12.5	0.83333333
02109	Steel Pipe and Fittings	12.5	0.83333333
02110	Introduction to Plumbing Fixtures	7.5	0.5
02111	Introduction to Drain, Waste, and Vent (DWV)	10	0.66666667
02112	Introduction to Water Distribution Systems	10	0.66666667
02201	Plumbing Math Two	15	1
02202	Reading Commercial Drawings	25	1.66666667
02203	Structural Penetrations, Insulation, and Fire-Stopping	15	1
02204	Installing and Testing DWV Piping	30	2
02205	Installing Roof, Floor and Area Drains	5	0.33333333
02206	Installing and Testing Water Supply Piping	20	1.33333333
02207	Types of Valves	5	0.33333333
02208	Installing Fixtures and Valves	20	1.33333333
02209	Installing Water Heaters	10	0.66666667
02210	Basic Electricity	10	0.66666667
02211	Fuel Gas and Fuel Oil Systems	20	1.33333333
02301	Applied Math	17.5	1.16666667
02303	Potable Water Supply Treatment	15	1
02305	Types of Venting	20	1.33333333
02306	Sizing DWV and Storm Systems	20	1.33333333
02307	Sewage Pumps and Sump Pumps	12.5	0.83333333

02308	Corrosive-Resistant Waste Piping	7.5	0.5
02309	Compressed Air	10	0.66666667
02311	Service Plumbing	27.5	1.83333333
02312	Sizing and Protecting the Water Supply System	30	2
02401	Business Principles for Plumbers	15	1
02403	Water Pressure Booster and Recirculation Systems	12.5	0.83333333
02404	Indirect and Special Waste	17.5	1.16666667
02405	Hydronic and Solar Heating Systems	17.5	1.16666667
02406	Codes	12.5	0.83333333
02408	Private Water Supply Well Systems	10	0.66666667
02409	Private Waste-Disposal Systems	10	0.66666667
02410	Swimming Pools and Hot Tubs	7.5	0.5
02411	Plumbing for Mobile Homes and Travel Trailer Parks	7.5	0.5
02412	Introduction to Medical Gas and Vacuum Systems	15	1
03101	Introduction to HVAC	7.5	0.5
03102	Trade Mathematics	10	0.66666667
03103	Basic Copper and Plastic Piping Practices	10	0.66666667
03104	Soldering and Brazing	10	0.66666667
03105	Basic Carbon Steel Piping Practices	10	0.66666667
03106	Basic Electricity	12.5	0.83333333
03107	Introduction to Cooling	30	2
03108	Introduction to Heating	15	1
03109	Introduction to Air Distribution Systems (HVAC, Sheet Metal)	15	1
03109	Air Distribution Systems (Weatherization Crew Chief)	10	0.66666667
03201	Commercial Airside Systems	12.5	0.83333333
03202	Chimneys, Vents, and Flues	5	0.33333333
03203	Introduction to Hydronic Systems (HVAC)	15	1
03203	Introduction to Hydronic Systems (Building Auditor)	10	0.66666667
03204	Air Quality Equipment	5	0.33333333
03205	Leak Detection, Evacuation, Recovery, and Charging	30	2
03206	Alternating Current	10	0.66666667
03209	Troubleshooting Gas Heating	15	1
03210	Troubleshooting Cooling	20	1.33333333
03211	Heat Pumps	20	1.33333333
03213	Sheet Metal Duct Systems	10	0.66666667
03214	Fiberglass and Flexible Duct Systems	7.5	0.5
03215	Basic Maintenance	20	1.33333333
03301	Refrigerants & Oils	15	1
03302	Compressors	12.5	0.83333333

03303	Metering Devices	12.5	0.83333333
03304	Retail Refrigeration System	15	1
03305	Commercial Hydronic Systems	12.5	0.83333333
03306	Steam Systems	10	0.66666667
03308	Water Treatment	10	0.66666667
03310	Troubleshooting Oil Heating	15	1
03311	Troubleshooting Heat Pumps	12.5	0.83333333
03312	Troubleshooting Accessories	7.5	0.5
03313	Fasteners, Hardware, and Wiring Terminations	10	0.66666667
03314	Control Circuit and Motor Troubleshooting	30	2
03315	Zoning, Ductless, and Variable Refrigerant Flow Systems	15	1
03316	Customer Relations	5	0.33333333
03401	Construction Drawings and Specifications	12.5	0.83333333
03402	System Air Balancing	15	1
03403	Indoor Air Quality (HVAC)	12.5	0.83333333
03403	Indoor Air Quality (Building Auditor & Weatherization Crew Chief)	15	1
03404	Energy Conservation Equipment (HVAC)	7.5	0.5
03404	Energy Conservation Equipment (Building Auditor)	10	0.66666667
03405	Building Management Systems	12.5	0.83333333
03406	System Startup and Shutdown	15	1
03407	Heating and Cooling System Design (HVAC)	22.5	1.5
03407	Heating and Cooling System Design (Building Auditor)	25	1.66666667
03408	Commercial/Industrial Refrigeration Systems	20	1.33333333
03409	Alternative and Specialized Heating and Cooling Systems	10	0.66666667
03410	Introduction to Supervisory Skills	15	1
04101	Occupational Overview: The Sheet Metal Industry	7.5	0.5
04102	Sheet Metal Tools and Equipment	10	0.66666667
04103	Sheet Metal Layout and Processes	17.5	1.16666667
04104	Sheet Metal Math and Measurements	20	1.33333333
04105	Parallel Line Development	27.5	1.83333333
04106	Installation of Ductwork	15	1
04107	Installation of Air Distribution Accessories	12.5	0.83333333
04202	Construction and Sheet Metal Drawings	17.5	1.16666667
04203	Radial Line Development	20	1.33333333
04204	Sheet Metal Duct Fabrication Standards	7.5	0.5

04206	Bend Allowances	7.5	0.5
04207	Soldering	15	1
04301	Field Measurements, Calculations, and Fittings	25	1.66666667
04303	Principles of Airflow	25	1.66666667
04305	Sheet Metal Job Specifications	20	1.33333333
04306	Triangulation	40	2.66666667
04307	Architectural Sheet Metal	25	1.66666667
04308	Using Construction Drawings in Sheet Metal	30	2
04401	Shop Production and Organization	25	1.66666667
04402	Air Testing and Balancing	30	2
04403	Welding and Brazing	25	1.66666667
04404	Fume and Exhaust System Design	25	1.66666667
04407	Sheet Metal Business and Technology	7.5	0.5
07101	Careers in the Painting Trade	5	0.33333333
07102	Safety	10	0.66666667
07103	Ladders, Scaffolds, Lifts, and Fall Protection	10	0.66666667
07104	Identifying Surface/Substrate Materials and Conditions	5	0.33333333
07105	Protecting Adjacent Surfaces	5	0.33333333
07106	Basic Surface Preparation	15	1
07107	Sealants and Repair/Fillers	5	0.33333333
07108	Introduction to Paints and Coatings	10	0.66666667
07109	Brushing and Rolling Paints and Coatings	15	1
07201	Painting Failures and Remedies	7.5	0.5
07202	Job Planning and Completion	10	0.66666667
07203	Chemical Cleaning and Stripping	7.5	0.5
07204	Low-Pressure Water Cleaning	7.5	0.5
07205	Abrasive Blasting	7.5	0.5
07206	Drywall Finishing and Patching	25	1.66666667
07207	Stains	7.5	0.5
07208	Clear Finishes	7.5	0.5
07209	Wood Finishing	22.5	1.5
07210	Coatings Two	10	0.66666667
07211	Spray Painting	32.5	2.16666667
07301	Painting Failures and Remedies Two	7.5	0.5
07302	Job Supervision, Planning and Control	15	1
07303	Coatings Three	15	1
07304	Color and Tinting	10	0.66666667
07305	Decorative (Faux) Finishes	22.5	1.5
07306	Wallcovering	40	2.66666667
07307	Graphics	12.5	0.83333333

07308	Texturing	10	0.66666667
07309	Spraying with Special Devices	20	1.33333333
08101	Orientation to the Pipefitting Craft	5	0.33333333
08102	Pipefitting Hand Tools	20	1.33333333
08103	Pipefitting Power Tools	15	1
08105	Ladders and Scaffolds	12.5	0.83333333
08106	Motorized Equipment One	10	0.66666667
08201	Piping Systems	5	0.33333333
08202	Drawings and Detail Sheets	15	1
08203	Identifying and Installing Valves	20	1.33333333
08204	Pipefitting Trade Math	15	1
08205	Threaded Pipe Fabrication	15	1
08206	Socket-Weld Pipe Fabrication	25	1.66666667
08207	Butt-Weld Pipe Fabrication	37.5	2.5
08208	Excavations	10	0.66666667
08209	Underground Pipe Installation	20	1.33333333
08303	Standards and Specifications	10	0.66666667
08304	Advanced Trade Math	25	1.66666667
08305	Motorized Equipment Two	10	0.66666667
08306	Introduction to Aboveground Pipe Installation	25	1.66666667
08307	Field Routing and Vessel Trim	15	1
08308	Pipe Hangers and Supports	25	1.66666667
08309	Testing Piping Systems and Equipment	20	1.33333333
08401	Advanced Blueprint Reading	50	3.33333333
08402	Advanced Pipe Fabrication	50	3.33333333
08403	Stress Relieving and Aligning	10	0.66666667
08405	In-Line Specialties	20	1.33333333
08406	Special Piping	25	1.66666667
08407	Hot Taps	10	0.66666667
08408	Maintaining Valves	10	0.66666667
12104	Electrical Systems for Instrumentation	22.5	1.5
12106	Fasteners	7.5	0.5
12107	Instrument Drawings and Documents Part One	7.5	0.5
12108	Gaskets, O-Rings, and Packing	10	0.66666667
12109	Lubricants, Sealants, and Cleaners	7.5	0.5
12110	Temperature, Pressure, Level, and Flow	15	1
12111	Tubing	15	1
12113	Hoses	7.5	0.5
12114	Hand and Power Tools for Instrumentation	12.5	0.83333333
12115	Instrumentation Safety Practices	12.5	0.83333333
12116	Electrical Systems for Instrumentation	12.5	0.83333333

12117	Steel Piping Practices	10	0.66666667
12119	Craft-Related Mathematics	10	0.66666667
12202	Instrument Drawings and Documents Part Two	17.5	1.16666667
12204	Process Control Theory (Instrumentation)	25	1.66666667
12204	Process Control Theory (Power Generation I&C Maintenance Technician)	20	1.33333333
12205	Detectors, Secondary Elements, Transducers, and Transmitters	25	1.66666667
12206	Controllers	10	0.66666667
12207	Control Valves, Actuators, and Positioners	15	1
12208	Relays and Timers (Instrumentation)	10	0.66666667
12208	Relays and Timers (Power Generation I&C Maintenance Technician)	7.5	0.5
12209	Switches and Photoelectric Devices (Instrumentation)	10	0.66666667
12209	Switches and Photoelectric Devices (Power Generation I&C Maintenance Technician)	5	0.33333333
12210	Instrument Air Filters, Regulators, and Dryers	7.5	0.5
12212	Panel-Mounted Instruments (Instrumentation)	10	0.66666667
12212	Panel-Mounted Instruments (Power Generation I&C Maintenance Technician)	7.5	0.5
12213	Installing Panel-Mounted Instruments	25	1.66666667
12214	Raceways for Instrumentation	17.5	1.16666667
12301	Instrument Fitter's Math	15	1
12302	Layout and Installation of Tubing and Piping Systems	35	2.33333333
12303	Clean, Purge, and Test Tubing and Piping Systems	10	0.66666667
12304	Inspect, Handle, and Store Instrumentation Materials	2.5	0.16666667
12305	Instrumentation Electrical Circuitry	25	1.66666667
12306	Grounding and Shielding of Instrumentation Wiring	10	0.66666667
12307	Terminating Conductors	20	1.33333333
12308	Protective Measures for Instrumentation	20	1.33333333
12401	Digital Logic Circuits (Instrumentation)	15	1
12401	Digital Logic Circuits (Power Generation I&C Maintenance Technician)	10	0.66666667
12402	Instrument Calibration and Configuration	60	4
12405	Tuning Loops	15	1
12406	Programmable Logic Controllers	12.5	0.83333333
12407	Distributed Control Systems	15	1

12408	Analyzers	20	1.33333333
12409	Analyzers and Monitors	30	2
12410	Proving, Commissioning, and Troubleshooting a Loop	17.5	1.16666667
15101	Orientation to the Trade (Millwright)	5	0.33333333
15102	Millwright Hand Tools	15	1
15103	Fasteners and Anchors	10	0.66666667
15104	Basic Layout	20	1.33333333
15105	Gaskets and O-Rings	10	0.66666667
15106	Oxyfuel Cutting	15	1
15201	Intermediate Trade Math	20	1.33333333
15202	Field Sketching	10	0.66666667
15203	Intermediate Blueprint Reading	20	1.33333333
15204	Specialty Tools	10	0.66666667
15205	Millwright Power Tools	20	1.33333333
15206	Rigging	20	1.33333333
15206	Rigging	22.5	1.5
15207	Setting Baseplates and Soleplates	15	1
15208	Lubrication	20	1.33333333
15209	Introduction to Bearings	15	1
15301	Advanced Trade Math	20	1.33333333
15302	Precision Measuring Tools	20	1.33333333
15303	Installing Packing	10	0.66666667
15304	Installing Seals	5	0.33333333
15305	Installing Mechanical Seals	20	1.33333333
15306	Removing and Installing Bearings	20	1.33333333
15307	Couplings	15	1
15308	Fabricating Shims	5	0.33333333
15309	Alignment Fixtures and Specialty Jigs	10	0.66666667
15310	Prealignment for Equipment Installation	15	1
15311	Installing Belt and Chain Drives	10	0.66666667
15312	Installing Fans and Blowers	10	0.66666667
15401	Conveyors	5	0.33333333
15402	Troubleshooting and Repairing Conveyors	12.5	0.83333333
15403	Conventional Alignment	30	2
15404	Pumps	20	1.33333333
15405	Troubleshooting and Repairing Pumps	7.5	0.5
15406	Compressors and Compressor Maintenance	20	1.33333333
15407	Basic Pneumatic Systems	7.5	0.5
15408	Troubleshooting and Repairing Pneumatic Equipment	10	0.66666667

15409	Basic Hydraulic Systems	10	0.66666667
15410	Troubleshooting and Repairing Hydraulic Equipment	7.5	0.5
15411	Troubleshooting and Repairing Gearboxes	20	1.33333333
15501	Reverse Alignment	30	2
15502	Laser Alignment	25	1.66666667
15503	Advanced Blueprint Reading	25	1.66666667
15504	Optical Alignment	25	1.66666667
15505	Turbines	20	1.33333333
15506	Maintaining and Repairing Turbine Components	15	1
15507	Installing Electric Motors	10	0.66666667
15508	Preventive and Predictive Maintenance	10	0.66666667
15509	Vibration Analysis	5	0.33333333
16101	Introduction to Roofing	2.5	0.16666667
16102	Roofing Safety	7.5	0.5
16103	Drawings in Roofing	10	0.66666667
16104	Substrates, Deck, and Roof Insulation	12.5	0.83333333
16105	Introduction to Steep-Slope Roofing	12.5	0.83333333
16106	Introduction to Low-Slope Roofing	10	0.66666667
16107	Sheet Metal in Roofing	25	1.66666667
18101	Orientation to the Trade (Sprinkler Fitting)	5	0.33333333
18102	Introduction to Components and Systems	7.5	0.5
18103	Steel Pipe	22.5	1.5
18104	CPVC Pipe and Fittings	10	0.66666667
18105	Copper Tube Systems	10	0.66666667
18106	Underground Pipe	17.5	1.16666667
18201	Hangers, Supports, Restraints, and Guides	15	1
18202	General Purpose Valves	15	1
18203	General Trade Math	20	1.33333333
18204	Shop Drawings	32.5	2.16666667
18205	Standard Spray Fire Sprinklers	20	1.33333333
18206	Wet Fire Sprinkler Systems	25	1.66666667
18207	Dry-Pipe Systems	25	1.66666667
18301	Deluge/Preaction Systems	40	2.66666667
18302	Standpipes	25	1.66666667
18303	Water Supplies	15	1
18304	Fire Pumps	40	2.66666667
18305	Application-Specific Sprinklers and Nozzles	27.5	1.83333333
18401	System Layout	45	3
18402	Inspection, Testing, and Maintenance	17.5	1.16666667
18403	Special Extinguishing Systems	42.5	2.83333333

18404	Introductory Skills for the Foreman	20	1.33333333
18405	Procedures and Documentation	20	1.33333333
19101	Orientation to the Trade (Mechanical Insulating)	5	0.33333333
19104	Material Handling, Storage, and Distribution	2.5	0.16666667
19105	Characteristics of Pipe	5	0.33333333
19106	Installing Fiberglass Pipe Insulation	30	2
19107	Insulating Pipe Fittings, Valves and Flanges	40	2.66666667
19201	Flexible Foam Insulation	25	1.66666667
19202	Blanket Insulation for Ducts	7.5	0.5
19203	Board Insulation for Ducts	20	1.33333333
19204	Calcium Silicate/Expanded Perlite Pipe Insulation	10	0.66666667
19205	Mineral Wool Insulation	12.5	0.83333333
19206	Rigid Foam and Cellular Glass Insulation	12.5	0.83333333
19207	Board and Block Insulation	17.5	1.16666667
19208	Cements and Fabric Finishes	10	0.66666667
19209	Plumbing Systems	7.5	0.5
19210	Chilled and Hot Water Heating Systems	5	0.33333333
19211	Vapor Retarders and Insulation Coatings	10	0.66666667
19212	Trade Math and Layout	7.5	0.5
19302	Air Duct Systems	7.5	0.5
19303	Heat Transfer	2.5	0.16666667
19304	Insulation Adhesives	5	0.33333333
19305	Steam and Process Water Systems	10	0.66666667
19306	Industrial Boiler Systems	7.5	0.5
19308	Specialized Insulation Systems	5	0.33333333
19309	Construction Drawings and Specifications	12.5	0.83333333
19310	Jacketing Fabrication- Pipe and Fittings	42.5	2.83333333
19312	Sheet-Metal Lagging	15	1
19313	Jacketing Systems	12.5	0.83333333
19314	Removable and Reusable Flexible Insulation Covers	12.5	0.83333333
21101	Orientation to the Trade (Mobile Crane Operations)	5	0.33333333
21102	Basic Principles of Cranes	15	1
21105	Operating a Crane	25	1.66666667
21106	Crane Safety and Emergency Procedures	25	1.66666667
21202	Machine Power Flow	15	1
21203	Mobile Crane Maintenance and Inspections	25	1.66666667
21204	Wire Rope	25	1.66666667
21205	Computer Aids/Operator Aids	20	1.33333333
21206	Load Dynamics	17.5	1.16666667

21207	On-Site Equipment Movement	25	1.66666667
21208	Transporting Requirements	17.5	1.16666667
21301	Load Charts	35	2.33333333
21302	Telescopic Boom Attachment Setup and Assembly	20	1.33333333
21303	Advanced Operational Techniques	20	1.33333333
21304	Lift Planning (Mobile Crane Operations)	30	2
21304	Lift Planning (Rigger/Signal Person)	20	1.33333333
21305	Hoisting Personnel	20	1.33333333
21306	Lattice Boom Assembly and Disassembly (Mobile Crane Operations)	20	1.33333333
21306	Lattice Boom Assembly and Disassembly (Rigger/Signal Person)	25	1.66666667
22101	Orientation to the Trade (Heavy Equipment Operations)	5	0.33333333
22102	Heavy Equipment Safety	10	0.66666667
22103	Identification of Heavy Equipment	5	0.33333333
22104	Basic Operational Techniques	27.5	1.83333333
22105	Utility Tractors	17.5	1.16666667
22106	Grades	15	1
22107	Vertical-Mast Sit-Down Counterbalance Forklifts	7.5	0.5
22201	Introduction to Earthmoving	12.5	0.83333333
22202	On-Road Dump Trucks	20	1.33333333
22203	Compaction Equipment	25	1.66666667
22204	Scrapers	17.5	1.16666667
22205	Loaders	17.5	1.16666667
22206	Rough Terrain Forklifts	22.5	1.5
22207	Excavation Math	17.5	1.16666667
22209	Interpreting Civil Drawings	20	1.33333333
22210	Site Work	20	1.33333333
22212	Skid Steers	22.5	1.5
22302	Dozers	30	2
22303	Backhoes	30	2
22304	Excavators	35	2.33333333
22305	Motor Graders	40	2.66666667
22307	Finishing and Grading	25	1.66666667
22308	Soils	10	0.66666667
22310	Off-Road Dump Trucks	30	2
23101	Introduction to Concrete Construction	7.5	0.5
23102	Concrete Safety	7.5	0.5
23104	Concrete Tools & Equipment	12.5	0.83333333

23105	Preparing for Placement	15	1
23108	Curing and Protecting Concrete	10	0.66666667
23120	Finishing Concrete	20	1.33333333
23202	Estimating Concrete Quantities	12.5	0.83333333
23204	Site Concrete	35	2.33333333
23205	Architectural Finishes	22.5	1.5
23206	Industrial Floors	27.5	1.83333333
23207	Superflat Floors	20	1.33333333
23208	Surface Treatments	15	1
23210	Concrete Repair	20	1.33333333
23212	Properties of Concrete	15	1
23220	Troubleshooting and Quality Control	15	1
24101	Job Site Safety	17.5	1.16666667
24102	Tools and Equipment	22.5	1.5
24103	Rigging and Delivering Pipe and Associated Structures	7.5	0.5
24104	Cutting Pipe	12.5	0.83333333
24105	Gaskets, Joints, and Fitting	20	1.33333333
24106	Introduction to Elevations	5	0.33333333
24107	Trench Safety	7.5	0.5
24108	Foundation Stabilization, Bedding, and Dewatering	7.5	0.5
24109	Testing Pipe	12.5	0.83333333
26101	Orientation to the Electrical Trade	2.5	0.16666667
26102	Electrical Safety	10	0.66666667
26103	Introduction to Electrical Circuits	7.5	0.5
26104	Electrical Theory	7.5	0.5
26105	Introduction to the National Electrical Code	7.5	0.5
26106	Device Boxes	10	0.66666667
26107	Hand Bending	10	0.66666667
26108	Raceways & Fittings	20	1.33333333
26109	Conductors and Cables	10	0.66666667
26110	Basic Electrical Construction Drawings	7.5	0.5
26111	Residential Electrical Services	15	1
26112	Electrical Test Equipment	5	0.33333333
26201	Alternating Current	17.5	1.16666667
26202	Motors: Theory & Application	20	1.33333333
26203	Electric Lighting	15	1
26204	Conduit Bending	15	1
26205	Pull and Junction Boxes	12.5	0.83333333
26206	Conductor Installations	10	0.66666667

26207	Cable Tray	7.5	0.5
26208	Conductor Terminations and Splices	7.5	0.5
26209	Grounding and Bonding	15	1
26210	Circuit Breakers and Fuses	12.5	0.83333333
26211	Control Systems and Fundamental Concepts	12.5	0.83333333
26301	Load Calculations - Branch and Feeder Circuits	17.5	1.16666667
26302	Conductor Selection and Calculation	15	1
26303	Practical Applications of Lighting	12.5	0.83333333
26304	Hazardous Locations	15	1
26305	Overcurrent Protection	25	1.66666667
26306	Distribution Equipment	12.5	0.83333333
26307	Transformers	12.5	0.83333333
26308	Commercial Electrical Services	10	0.66666667
26309	Motor Calculations	12.5	0.83333333
26310	Voice, Data, Video	10	0.66666667
26311	Motor Controls	12.5	0.83333333
26401	Load Calculations - Feeders & Services	20	1.33333333
26402	Health Care Facilities	10	0.66666667
26403	Standby and Emergency Systems	10	0.66666667
26404	Basic Electronic Theory	10	0.66666667
26405	Fire Alarm Systems	15	1
26406	Specialty Transformers	10	0.66666667
26407	Advanced Controls	20	1.33333333
26408	HVAC Controls	15	1
26409	Heat Tracing and Freeze Protection	10	0.66666667
26410	Motor Operation and Maintenance	10	0.66666667
26411	Medium-Voltage Terminations/Splices	10	0.66666667
26412	Special Locations	20	1.33333333
26501	Managing Electrical Hazards	12.5	0.83333333
26501	Managing Electrical Hazards	17.5	1.16666667
27101	Orientation to the Trade (Carpentry)	2.5	0.16666667
27102	Building Materials, Fasteners and Adhesives	20	1.33333333
27103	Hand and Power Tools	10	0.66666667
27104	Introduction to Construction Drawings, Specifications, and Layout	22.5	1.5
27105	Floor Systems	25	1.66666667
27105	Floor Systems	27.5	1.83333333
27109	Introduction to Building Envelope Systems	12.5	0.83333333
27110	Basic Stair Layout	12.5	0.83333333
27111	Wall Systems	10	0.66666667
27111	Wall Systems	10	1.33333333

27112	Ceiling Joist and Roof Framing	47.5	3.16666667
27112	Ceiling Joist and Roof Framing	40	2.66666667
27201	Commercial Drawings	25	1.66666667
27202	Roofing Applications	25	1.66666667
27203	Thermal and Moisture Protection	7.5	0.5
27204	Exterior Finishing	35	2.33333333
27204	Foundations and Flatwork	15	1
27205	Cold-Formed Steel Framing	15	1
27205	Concrete Forms	32.5	2.16666667
27206	Drywall Installation	15	1
27207	Drywall Finishing	17.5	1.16666667
27207	Handling and Placing Concrete	22.5	1.5
27208	Doors and Door Hardware	20	1.33333333
27208	Manufactured Forms	22.5	1.5
27209	Suspended Ceilings	15	1
27210	Window, Door, Floor, and Ceiling Trim	25	1.66666667
27211	Cabinet Installation	10	0.66666667
27303	Properties of Concrete	10	0.66666667
27304	Reinforcing Concrete	15	1
27305	Handling and Placing Concrete	20	1.33333333
27306	Trenching and Excavating	15	1
27307	Foundations and Slabs-On-Grade	20	1.33333333
27308	Vertical Formwork	22.5	1.5
27309	Horizontal Formwork	15	1
27310	Tilt-Up Wall Systems	17.5	1.16666667
27401	Site Layout One: Differential Leveling	20	1.33333333
27402	Site Layout Two: Angular and Distance Measurement	37.5	2.5
27403	Advanced Roof Systems	20	1.33333333
27404	Advanced Wall Systems	25	1.66666667
27405	Advanced Stair Systems	25	1.66666667
27406	Introduction to Construction Equipment	7.5	0.5
27407	Introduction to Oxyfuel Cutting and Arc Welding	20	1.33333333
27409	Site Preparation	7.5	0.5
27501	Cabinetmaking	35	2.33333333
28101	Introduction to Masonry	12.5	0.83333333
28102	Masonry Tools & Equipment	15	1
28103	Measurements, Drawings, and Specifications	10	0.66666667
28104	Mortar	10	0.66666667
28105	Masonry Units and Installation Techniques	60	4
28106	Masonry Safety	15	1

28201	Residential Plans and Drawing Interpretation	12.5	0.83333333
28202	Reinforced Masonry	20	1.33333333
28204	Masonry Openings and Metalwork	20	1.33333333
28205	Advanced Laying Techniques	40	2.66666667
28206	Effects of Climate on Masonry	20	1.33333333
28207	Construction Inspection and Quality Control	15	1
28301	Elevated Masonry	15	1
28302	Specialized Materials and Techniques	60	4
28303	Repair and Restoration	20	1.33333333
28304	Commercial Drawings	25	1.66666667
28305	Estimating	25	1.66666667
28306	Site Layout- Distance Measurement and Leveling	20	1.33333333
28308	Stone Masonry	15	1
29101	Welding Safety (Welding, Maritime Aluminum Welding,	5	0.33333333
29101	Welding Safety (Maritime Structural Fitter)	2.5	0.16666667
29102	Oxyfuel Cutting	17.5	1.16666667
29103	Plasma Arc Cutting	7.5	0.5
29104	Air Carbon Arc Cutting and Gouging	12.5	0.83333333
29104	Air Carbon Arc Cutting and Gouging	10	0.66666667
29105	Base Metal Preparation	12.5	0.83333333
29106	Weld Quality	10	0.66666667
29107	SMAW - Equipment and Setup	5	0.33333333
29108	SMAW - Electrodes	2.5	0.16666667
29109	SMAW - Beads and Fillet Welds	100	6.66666667
29110	Joint Fit-Up and Alignment	5	0.33333333
29111	SMAW - Groove Welds with Backing	50	3.33333333
29112	SMAW - Open-Root Groove Welds - Plate	60	4
29201	Welding Symbols	5	0.33333333
29202	Reading Welding Detail Drawings	10	0.66666667
29203	Physical Characteristics and Mechanical Properties of Metals	7.5	0.5
29204	Preheating and Postheating of Metals	5	0.33333333
29205	GMAW and FCAW - Equipment and Filler Metals	10	0.66666667
29206	GMAW & FCAW - Plate	80	5.33333333
29207	GTAW - Equipment and Filler Metals	10	0.66666667
29208	GTAW - Plate	60	4
29209	GMAW - Plate	60	4
29210	FCAW - Plate	60	4
29301	SMAW - Open-Root Pipe Welds	100	6.66666667
29302	GMAW - Pipe	60	4
29303	FCAW - Pipe	60	4

29304	GTAW - Carbon Steel Pipe	80	5.33333333
29305	GTAW - Low Alloy and Stainless Steel Pipe	70	4.66666667
29306	SMAW - Stainless Steel Plate and Pipe Groove Welds	100	6.66666667
29401	GMAW - Aluminum Plate	30	2
29402	GTAW - Aluminum Plate	30	2
29403	GTAW - Aluminum Pipe	50	3.33333333
29404	GMAW - Aluminum Pipe	50	3.33333333
29405	Soldering and Brazing	12.5	0.83333333
30101	Introduction to the Trade (Ironworking)	5	0.33333333
30102	Trade Safety	12.5	0.83333333
30103	Tools and Equipment of the Trade	10	0.66666667
30104	Fastening	5	0.33333333
30105	Mobile Construction Cranes	10	0.66666667
30106	Rigging Equipment	10	0.66666667
30107	Rigging Practices	15	1
30108	Trade Drawings One	12.5	0.83333333
30109	Structural Ironworking One	7.5	0.5
30110	Plumbing, Aligning, and Guying	5	0.33333333
30112	Introduction to Arc Welding	22.5	1.5
30113	Bar Joists and Girders	5	0.33333333
30114	Metal Decking	10	0.66666667
30115	Field Fabrication	15	1
30116	Metal Decking	10	0.66666667
30201	Trade Math	25	1.66666667
30202	Position Arc Welding	20	1.33333333
30203	Forklifts	17.5	1.16666667
30204	Trade Drawings Two	10	0.66666667
30205	Structural Ironworking Two	30	2
30206	Steel Joists and Joist Girders	15	1
30207	Tower Cranes	15	1
30208	Survey Equipment Use and Care One	10	0.66666667
30302	Pre-Engineered Systems	5	0.33333333
30303	Miscellaneous/Ornamental Ironworking	5	0.33333333
30304	Stud Welding	10	0.66666667
30307	Special Application Hoisting Devices	10	0.66666667
30310	Demolition	10	0.66666667
30311	Precast/Tilt-Up Erection	12.5	0.83333333
30312	Structural Ironworking Three	10	0.66666667
30313	Applied Trade Math	5	0.33333333
30314	Flux Core for Ironworking	40	2.66666667

30315	Survey Equipment Use and Care Two	15	1
30316	Grating and Checkered Plate	5	0.33333333
31101	Introduction to the Trade (Scaffolding)	7.5	0.5
31102	Trade Safety	7.5	0.5
31103	Trade Tools and Equipment	7.5	0.5
31104	Trade Math	7.5	0.5
31105	Supported Scaffolds	32.5	2.16666667
31106	Mobile Scaffolds	10	0.66666667
31107	Suspension Scaffolds	7.5	0.5
32101	Orientation to the Trade (Industrial Maintenance Mechanic)	2.5	0.16666667
32102	Tools of the Trade	5	0.33333333
32103	Fasteners and Anchors	5	0.33333333
32104	Oxyfuel Cutting	17.5	1.16666667
32105	Gaskets and Packing	10	0.66666667
32106	Craft-Related Mathematics	15	1
32107	Construction Drawings	12.5	0.83333333
32108	Pumps and Drivers	5	0.33333333
32109	Valves	5	0.33333333
32110	Introduction to Test Instruments	7.5	0.5
32111	Material Handling and Hand Rigging	15	1
32112	Mobile and Support Equipment	10	0.66666667
32113	Lubrication	12.5	0.83333333
32201	Basic Layout	20	1.33333333
32202	Introduction to Piping Components	5	0.33333333
32203	Copper and Plastic Piping Practices	5	0.33333333
32204	Introduction to Ferrous Metal Piping Practices	5	0.33333333
32205	Identify, Install, and Maintain Valves	10	0.66666667
32206	Hydrostatic and Pneumatic Testing	10	0.66666667
32207	Introduction to Bearings	15	1
32208	Low-Pressure Steam Systems	10	0.66666667
32209	High-Pressure Steam Systems and Auxiliaries	20	1.33333333
32210	Distillation Towers and Vessels	20	1.33333333
32211	Heaters, Furnaces, Heat Exchangers, Cooling Towers, and Fin Fans	30	2
32212	Introduction to Tube Work	10	0.66666667
32301	Advanced Trade Math	30	2
32302	Precision Measuring Tools	20	1.33333333
32303	Installing Bearings	20	1.33333333
32304	Installing Couplings	15	1
32305	Setting Baseplates and Prealignment	30	2

32306	Conventional Alignment	30	2
32307	Installing Belt and Chain Drives	10	0.66666667
32308	Installing Mechanical Seals	20	1.33333333
32401	Preventive and Predictive Maintenance	10	0.66666667
32402	Advanced Blueprint Reading	25	1.66666667
32403	Compressors and Pneumatic Systems	35	2.33333333
32404	Reverse Alignment	30	2
32405	Laser Alignment	25	1.66666667
32406	Introduction to Supervisory Skills	15	1
32407	Troubleshooting and Repairing Pumps	10	0.66666667
32408	Troubleshooting and Repairing Gearboxes	20	1.33333333
32501	Advanced Towers and Vessels	15	1
32502	Troubleshooting and Repairing Conveyors	12.5	0.83333333
33102	Wood and Masonry Construction Methods	12.5	0.83333333
33103	Concrete and Steel Construction Methods	12.5	0.83333333
33108	Limited-Energy Cabling	20	1.33333333
33205	Test Equipment	10	0.66666667
33208	Limited-Energy Cable Selection	10	0.66666667
33209	Limited-Energy Cable Termination	25	1.66666667
33301	Limited-Energy Network Installations	25	1.66666667
33302	Fiber Optics	25	1.66666667
33303	Wireless Communication	15	1
33304	Site Survey, Project Planning, and Documentation	15	1
33305	Rack Assembly	17.5	1.16666667
33306	System Commissioning and User Training	20	1.33333333
33307	Maintenance and Repair	20	1.33333333
33401	Audio Systems	30	2
33402	Video Systems	40	2.66666667
33403	Broadband	25	1.66666667
33404	Media Management Systems	25	1.66666667
33405	Telecommunications Systems	20	1.33333333
33406	Residential and Commercial Networks	15	1
33407	Intrusion Detection Systems	30	2
33408	Fire Alarm Systems	40	2.66666667
33409	Nurse Call and Signaling Systems	15	1
33410	Closed Circuit Television (CCTV)	30	2
33411	Access Control Systems	35	2.33333333
33412	EST and Internet of Things (IoT)	10	0.66666667
34101	Introduction to Boilermaking	10	0.66666667
34102	Boilermaking Safety	12.5	0.83333333
34103	Boilermaking Tools	15	1

34104	Basic Materials	10	0.66666667
34105	Oxyfuel Cutting	17.5	1.16666667
34106	Cutting and Fitting Gaskets	12.5	0.83333333
34107	Base Metal Preparation	10	0.66666667
34108	Welding Basics	22.5	1.5
34201	Boiler Systems and Components	22.5	1.5
34202	Identifying and Installing Valves	20	1.33333333
34203	Pipe Hangers and Supports	25	1.66666667
34204	Drawings and Detail Sheets	15	1
34205	Fasteners and Anchors	5	0.33333333
34206	Welding Symbols	5	0.33333333
34207	Socket Weld Pipe Fabrication	25	1.66666667
34208	Butt Weld Pipe Fabrication	40	2.66666667
34209	Tube Weld Preparation and Fitting	15	1
34210	Air Carbon Arc Cutting and Gouging	12.5	0.83333333
34301	Boiler Pressure Components	25	1.66666667
34302	Boiler Nonpressure Components	15	1
34303	Advanced Tube Work	20	1.33333333
34305	Brick, Refractory, Insulation and Lagging (BRIL)	5	0.33333333
34306	Boiler Auxiliaries	25	1.66666667
34307	Towers and Exchangers	25	1.66666667
34308	Testing Piping Systems and Equipment	20	1.33333333
34401	Advanced Mechanical Trade Math	15	1
34402	Advanced Boilermaking Construction Drawings	20	1.33333333
34406	Stress Relieving	10	0.66666667
34407	Quality Assurance	10	0.66666667
34410	Advanced Rigging	20	1.33333333
34411	Advanced Exchangers	25	1.66666667
34412	Advanced Towers	25	1.66666667
36101	Orientation to the Trade (Heavy Highway Construction)	7.5	0.5
36107	Plant Operations	7.5	0.5
36108	Paving	12.5	0.83333333
36110	Heavy Highway Construction Safety	5	0.33333333
36111	Identification of Equipment Used in Heavy Highway Construction	10	0.66666667
36112	Working with Concrete	15	1
36201	Bridge Construction	20	1.33333333
36202	Bridge Foundations	10	0.66666667
36203	Bridge Framework	22.5	1.5
38101	Rigging Equipment	10	0.66666667

38102	Rigging Practices	15	1
38201	Intermediate Rigging	10	0.66666667
38301	Advanced Rigging (Ironworking)	10	0.66666667
38301	Advanced Rigging (Rigger/Signal Person)	20	1.33333333
38302	Lift Planning	40	2.66666667
39101	Concrete Reinforcement	40	2.66666667
39102	Concrete Reinforcement Safety	15	1
39103	Rigging Equipment	10	0.66666667
39104	Rigging Practices	15	1
39105	Commercial Blueprints	20	1.33333333
39106	Oxyfuel Cutting	17.5	1.16666667
40101	Orientation to the Trade (Industrial Maintenance Electrical & Instrumentation Technician)	2.5	0.16666667
40102	Tools of the Trade	5	0.33333333
40103	Fasteners and Anchors	5	0.33333333
40104	Oxyfuel Cutting	17.5	1.16666667
40105	Gaskets and Packing	10	0.66666667
40106	Craft-Related Mathematics	15	1
40107	Construction Drawings	12.5	0.83333333
40108	Pumps and Drivers	5	0.33333333
40109	Valves	5	0.33333333
40110	Introduction to Test Instruments	7.5	0.5
40111	Material Handling and Hand Rigging	15	1
40112	Mobile and Support Equipment	10	0.66666667
40113	Lubrication	12.5	0.83333333
40201	Industrial Safety for E&I Technicians	12.5	0.83333333
40202	Introduction to the National Electrical Code	5	0.33333333
40203	Electrical Theory	15	1
40204	Alternating Current	20	1.33333333
40205	E&I Test Equipment	10	0.66666667
40206	Flow, Pressure, Level, and Temperature	15	1
40207	Process Mathematics	15	1
40208	Hand Bending	10	0.66666667
40209	Tubing	15	1
40210	Clean, Purge, and Test Tubing and Piping Systems	7.5	0.5
40211	Instrument Drawings and Documents, Part One	15	1
40212	Conductors and Cables	10	0.66666667
40213	Conductor Terminations and Splices	10	0.66666667
40301	Hazardous Locations	10	0.66666667
40302	Electronic Components	10	0.66666667
40303	E & I Drawings	10	0.66666667

40304	Motor Controls	15	1
40305	Distribution Equipment	17.5	1.16666667
40306	Transformer Applications	7.5	0.5
40307	Conductor Selection and Calculation	15	1
40308	Temporary Grounding	15	1
40309	Layout and Installation of Tubing and Piping Systems	22.5	1.5
40310	Machine Bending of Conduit	15	1
40311	Hydraulic Controls	15	1
40312	Pneumatic Controls	15	1
40313	Motor-Operated Valves	15	1
40401	Standby and Emergency Systems	12.5	0.83333333
40402	Basic Process Control Elements, Transducers, and Transmitters	15	1
40403	Instrumentation Calibration and Configuration	10	0.66666667
40404	Pneumatic Control Valves, Actuators, and Positioners	40	2.66666667
40405	Performing Loop Checks	7.5	0.5
40406	Troubleshooting and Commissioning a Loop	10	0.66666667
40407	Process Control Loops and Tuning	20	1.33333333
40408	Data Networks	15	1
40409	Programmable Logic Controllers	17.5	1.16666667
40410	Distributed Control Systems	17.5	1.16666667
43101	Hydroblasting	20	1.33333333
44101	Introduction to Project Management	2.5	0.16666667
44102	Safety	15	1
44103	Interpersonal Skills	12.5	0.83333333
44104	Issues and Resolutions	15	1
44105	Construction Documents	10	0.66666667
44106	Construction Planning	10	0.66666667
44107	Estimating and Cost Control	15	1
44108	Scheduling	15	1
44109	Resource Control	10	0.66666667
44110	Quality Control	5	0.33333333
44111	Continuous Improvement	5	0.33333333
45101	Orientation to the Trade (Drywall)	5	0.33333333
45102	Construction Materials and Methods	12	0.8
45103	Thermal and Moisture Protection	7.5	0.5
45104	Drywall Installation	25	1.66666667
45105	Drywall Finishing	25	1.66666667
45201	Commercial Drawings	25	1.66666667

45202	Steel Framing	50	3.33333333
45203	Acoustical Ceilings	20	1.33333333
45204	Interior Specialties	15	1
45205	Exterior Cladding	20	1.33333333
45206	Specialty Finishes	15	1
46101	Fundamentals of Crew Leadership	22.5	1.5
46101	Fundamentals of Crew Leadership	20	1.33333333
48101	Orientation to the Trade (Tower Crane Operator)	5	0.33333333
48102	Basic Principles of Tower Cranes	20	1.33333333
48103	Tower Crane Safety	15	1
48104	Rigging Practices	15	1
48105	Load Charts	15	1
48106	Communications	10	0.66666667
48107	Operating a Tower Crane	25	1.66666667
49101	Introduction to the Power Industry	12.5	0.83333333
49102	Power Line Worker Safety	22.5	1.5
49103	Introduction to Electrical Circuits	7.5	0.5
49104	Introduction to Electrical Theory	7.5	0.5
49105	Climbing Wooden Poles	80	5.33333333
49106	Climbing Structures Other Than Wood	40	2.66666667
49107	Tools of the Trade	10	0.66666667
49108	Aerial Framing and Associated Hardware	80	5.33333333
49109	Utility Service Equipment	15	1
49110	Rigging	12.5	0.83333333
49111	Setting and Pulling Poles	20	1.33333333
49112	Trenching, Excavating, and Boring Equipment	7.5	0.5
49113	Introduction to Electrical Test Equipment	7.5	0.5
50301	Power Plant Electrical Systems	12.5	0.83333333
50401	Generator Maintenance	20	1.33333333
50402	Switchgear and Breaker Maintenance	25	1.66666667
51401	Calibrate Supervisory Instrumentation Elements	10	0.66666667
51402	Boiler/HRSO Control	12.5	0.83333333
52401	Vibration and Balancing	12.5	0.83333333
52402	Fuel Preparation and Delivery Equipment	25	1.66666667
53101	Crane Communications	10	0.66666667
57101	Introduction to Solar Photovoltaics	40	2.66666667
57102	Site Assessment	10	0.66666667
57103	System Design	25	1.66666667
57104	System Installation and Inspection	60	4
57105	Maintenance and Troubleshooting	10	0.66666667
57106	Roofing Fundamentals	17.5	1.16666667

57107	Roof-Mounted Solar PV Installation	20	1.33333333
57108	Ground-Mounted Solar PV Installation	20	1.33333333
57109	Safety and Awareness: Utility--Scale PV Projects	17.5	1.16666667
58101	Introduction to Wind Energy	15	1
58102	Introduction to Wind Turbine Safety	12.5	0.83333333
58103	Climbing Wind Towers	40	2.66666667
58104	Electrical Wiring	10	0.66666667
58105	Circuit Breakers and Fuses	10	0.66666667
58106	Switching Devices	12.5	0.83333333
58107	Wind Turbine Power Distribution Systems	12.5	0.83333333
58108	Fasteners and Torquing	20	1.33333333
58109	Lubrication	12.5	0.83333333
58110	Introduction to Hydraulic Systems	10	0.66666667
59101	Introduction to Weatherization	17.5	1.16666667
59102	Sealing the Building Envelope	25	1.66666667
59103	Insulating Pipes, Ducts, and Water Heaters	10	0.66666667
59201	Diagnostics and Management Practices	30	2
59202	Performing a Building Audit	42.5	2.83333333
60102	Basic Pipeline Hydraulics and Equipment	10	0.66666667
60103	Pipeline Communications	7.5	0.5
60104	Product Batch and Pig Tracking	10	0.66666667
60107	Field Quality Control	15	1
60108	Field Measurement	20	1.33333333
62103	Release Identification and Response	5	0.33333333
62104	Tools of the Trade: Pipeline Industry	7.5	0.5
62105	Pipeline Documentation	5	0.33333333
62301	General Maintenance and Winterizing Pipeline Equipment	7.5	0.5
62307	Tank Repair	40	2.66666667
63103	Pipeline Mechanic Hand and Power Tools	10	0.66666667
63104	Piping and Mechanical Blueprint Reading	15	1
63105	Tubing, Threaded Pipe, and Hoses	30	2
63106	Fasteners	10	0.66666667
63108	Identify Types of Valve Actuators/Operators	15	1
63109	Installing Seals and Gaskets	10	0.66666667
63201	Introduction to Pneumatic Systems	10	0.66666667
63202	Introduction to Hydraulic Systems	10	0.66666667
63203	Speciality and Precision Tools	15	1
63206	Introduction to Metering Devices and Provers	10	0.66666667
63207	Introduction to Pumps	10	0.66666667
63208	Introduction to Gas Compressors	10	0.66666667

63209	Install and Maintain Bearings	15	1
63210	Install Mechanical Seals	20	1.33333333
63211	Maintain and Repair Drivers	15	1
63301	Install Rotating Equipment	25	1.66666667
63302	Unit Alignment	40	2.66666667
63303	Vibration Analysis	5	0.33333333
63304	Maintain, Troubleshoot, and Repair Pumps	10	0.66666667
63305	Maintain, Troubleshoot, and Repair Gas Compressors	15	1
63309	Maintain, Troubleshoot, and Repair Metering Devices and Provers	20	1.33333333
64102	Pipeline E&I Safety	15	1
64103	Trade Math	40	2.66666667
64104	Electrical Theory	40	2.66666667
64105	Tools of the Trade: Pipeline Electrical and Instrumentation	15	1
64106	Pipeline Operations	40	2.66666667
64107	Pipeline E&I Drawings	30	2
64108	Understanding the <i>National Electrical Code</i> ®	7.5	0.5
64109	Fasteners and Anchors	7.5	0.5
64201	Electrical Installations in Classified Areas	40	2.66666667
64202	Use of Meters and Test Equipment	15	1
64203	Grounding	30	2
64204	Process Control Theory	40	2.66666667
64205	Supervisory Control Systems	15	1
64301	Transformers	25	1.66666667
64302	Switchgear and MCCs	25	1.66666667
64303	Low-Voltage and Standby Power	25	1.66666667
64304	Power Quality	25	1.66666667
64305	Prime Movers	32.5	2.16666667
64306	Facility Auxiliary Systems	22.5	1.5
64307	SCADA	30	2
65107	Liquid Pipeline Measurement and Quality Control	20	1.33333333
66101	Introduction to the Pipeline Industry	15	1
67102	Basic Pipeline Pneumatics and Equipment	10	0.66666667
67106	Quality Control and Measurement	20	1.33333333
69101	Introduction to the Trade (Industrial Coating and Lining Application Specialist)	5	0.33333333
69102	Surface Preparation	100	6.66666667
69103	Industrial Coatings	15	1
69104	Coating Application	105	7

69105	Health and Safety, Debris Management, Containment, and Ventilation	47.5	3.16666667
69201	Industrial Coating Safety	30	2
69202	Corrosion Protection	5	0.33333333
69203	Work Planning and Quality Control	25	1.66666667
69204	Containment	60	4
69205	Surface Preparation Two	80	5.33333333
69206	Industrial Coatings Two	20	1.33333333
69207	Coating Applications Two	100	6.66666667
70101	Your Role in the Green Environment	15	1
70201	Sustainable Construction Supervisor	20	1.33333333
74101	Introduction to Alternative Energy	25	1.66666667
74102	Biomass and Biofuels	22.5	1.5
74103	Nuclear Power	25	1.66666667
74104	Solar Power	25	1.66666667
74105	Wind Power	22.5	1.5
75101	Introduction to Safety	10	0.66666667
75104	Work-Zone Safety	5	0.33333333
75110	Steel Erection	2.5	0.16666667
75119	Concrete and Masonry	2.5	0.16666667
75120	Confined Spaces and Excavations	5	0.33333333
75121	Electrical Safety	5	0.33333333
75122	Working from Elevations	5	0.33333333
75123	Heavy Equipment, Forklift, and Crane Safety	5	0.33333333
75124	Introduction to Materials Handling	5	0.33333333
75201	Introduction to Safety Technology	2.5	0.16666667
75205	Positive Safety Communication	2.5	0.16666667
75219	Hazard Recognition, Environment Awareness, and Occupational Health	5	0.33333333
75220	Job Safety Analysis and Pre-Task Planning	5	0.33333333
75221	Safety Data Tracking and Trending	5	0.33333333
75222	Site Specific Safety Plans	5	0.33333333
75223	Safety Orientation and Safety Meetings	5	0.33333333
75224	Permits and Policies	5	0.33333333
75225	Incident Investigations, Policies, and Analysis	5	0.33333333
75226	OSHA Inspections and Recordkeeping	5	0.33333333
75901	Fall Protection Orientation	8	0.53333333
78101	Introduction to Site Layout	10	0.66666667
78102	Surveying Math	30	2
78103	Survey Equipment Use and Care One	30	2
78104	Blueprint Reading for Surveyors	20	1.33333333

78201	Advanced Surveying Math	30	2
78202	Survey Equipment Use and Care Two, EDMs and Total Stations	10	0.66666667
78203	Control Setup	30	2
78204	Boundary and Topography Surveys	10	0.66666667
78205	Data Collection and Basic Computer Skills	10	0.66666667
78206	Concrete Properties and Quality Control	15	1
78207	Means and Methods	40	2.66666667
80201	Alternating Current and Three-Phase Systems	17.5	1.16666667
80202	Aerial Distribution Equipment	25	1.66666667
80203	Cable and Conductor Installation and Removal	20	1.33333333
80204	Underground Residential Distribution (URD) Systems	30	2
80205	Overhead and URD Service Installations	15	1
80206	Distribution Line Maintenance	50	3.33333333
80301	Live-Line Work	40	2.66666667
80302	Three-Phase URD Systems	25	1.66666667
80303	System Protection and Monitoring	7.5	0.5
80304	Troubleshooting	40	2.66666667
80305	Introduction to Smart Grids	2.5	0.16666667
81201	Transmission Structure Rigging	17.5	1.16666667
81202	Transmission Structure Erection	50	3.33333333
81203	Transmission Equipment Installation	50	3.33333333
81204	Transmission System Maintenance	40	2.66666667
81301	Construction, Maintenance, and Repair - Live-Line Barehand	40	2.66666667
81302	Reconductoring Transmission Lines	40	2.66666667
81303	Construction, Maintenance, and Repair - Hot Stick	80	5.33333333
82201	Introduction to Substations	10	0.66666667
82202	Conductors and Cables	10	0.66666667
82203	Grounding Systems	12.5	0.83333333
82204	Concrete Work	35	2.33333333
82205	Mechanical Construction Methods and Materials	17.5	1.16666667
82301	Advanced Drawing Reading	20	1.33333333
82302	Medium- and High-Voltage Equipment Installation	25	1.66666667
82303	Control House	20	1.33333333
82304	Connectors, Conductor Terminations, and Splicing	25	1.66666667
82305	Equipment Testing and Maintenance	30	2
82306	System Protection and Control	12.5	0.83333333

84101	Introduction to the Maritime Industry	12.5	0.83333333
85101	Orientation to the Maritime Pipefitting Trade	5	0.33333333
85102	Maritime Pipefitting Trade Math	15	1
85103	Pipefitting Hand Tools	20	1.33333333
85104	Pipefitting Power Tools	15	1
85105	Oxyfuel Cutting	17.5	1.16666667
85106	Ladders and Scaffolds	12.5	0.83333333
85201	Piping Systems	5	0.33333333
85202	Butt Weld Pipe Fabrication	37.5	2.5
85203	Socket Weld Pipe Fabrication	25	1.66666667
85204	Brazing	12.5	0.83333333
85205	Threaded Pipe Fabrication	15	1
85206	Fiberglass and Plastic Pipe	12.5	0.83333333
85207	Identifying Valves, Flanges, and Gaskets	20	1.33333333
85208	Drawings and Detail Sheets	20	1.33333333
86101	Tack Welding	40	2.66666667
86102	Fire Watch	5	0.33333333
86103	Introduction to Structural Fitter Drawings	10	0.66666667
86104	Fitting One	40	2.66666667
86201	Cutting and Burning Processes	40	2.66666667
86202	Intermediate Structural Print Reading	40	2.66666667
86203	Fitting Two	140	9.33333333
86301	Advanced Structural Print Reading	40	2.66666667
86302	Fitting Three	80	5.33333333
AOCFG	Abnormal Operating Conditions Field and Gas	5	0.33333333
AOCCC	Abnormal Operations Conditions Control Center	5	0.33333333
CT1_1	Measure Structure-to-Soil Potentials	5	0.33333333
CT1_2	Conduct Close Interval Survey	5	0.33333333
CT1_3	Test and Detect Interference	5	0.33333333
CT1_4	Inspect and Perform Electrical Test of Bonds	5	0.33333333
CT1_5	Inspect and Test Electrical Isolation	5	0.33333333
CT2_1	Verify Test Lead Continuity	5	0.33333333
CT2_2	Repair Damaged Test Leads	5	0.33333333
CT2_3	Install Test Leads by Non-Exothermic Welding Methods	5	0.33333333
CT2_4	Install Test Leads by Exothermic Welding Methods	5	0.33333333
CT3_0	Obtain a Voltage Current Output Reading from a Rectifier to Verify Proper Performance	5	0.33333333
CT4_1	Troubleshoot Rectifier	5	0.33333333
CT4_2	Repair or Replace Defective Rectifier Components	5	0.33333333

CT4_3	Adjustment of Rectifier	5	0.33333333
CT5_1	Examine for Mechanical Damage on Buried or Submerged Pipe	5	0.33333333
CT5_2	Examine for External Corrosion on Buried or Submerged Pipe	5	0.33333333
CT5_3	Inspect the Condition of External Coating on Buried or Submerged Pipe	5	0.33333333
CT7_1	Visual Inspection of Atmospheric Coatings	5	0.33333333
CT7_2	Prepare Surface for Atmospheric Coating Using Hand and Power Tools	5	0.33333333
CT7_3	Prepare Surface for Coating by Abrasive Water Blasting	5	0.33333333
CT7_4	Prepare Surface for Coating by Abrasive Blasting Media Other Than Water	5	0.33333333
CT7_5	Apply Coating Using Hand Application Methods	5	0.33333333
CT7_6	Apply Coating Using Spray Application	5	0.33333333
CT7_7	Perform Coating Inspection	5	0.33333333
CT8_1	Measure Pit Depth with Pit Gauge	5	0.33333333
CT8_2	Measure Wall Thickness with Ultrasonic Meter	5	0.33333333
CT8_3	Measure Corroded Area	5	0.33333333
CT9_1	Install Bonds	5	0.33333333
CT9_2	Install Galvanic Anodes	5	0.33333333
CT9_3	Install Rectifiers	5	0.33333333
CT9_4	Install Impressed Current Groundbeds	5	0.33333333
CT9_5	Repair Shorted Casings	5	0.33333333
CT9_6	Install Electrical Insulating Device	5	0.33333333
CT10_1	Insert and Remove Coupons	5	0.33333333
CT10_2	Monitor Probes (Online)	5	0.33333333
CT11_0	Monitoring and Controlling the Injection Rate of the Corrosion Inhibitor	5	0.33333333
CT12_0	Visually Inspect Internal Pipe Surface	5	0.33333333
CT14_1	Locate Line	5	0.33333333
CT14_2	Install, Inspect, and Maintain Permanent Marker	5	0.33333333
CT14_5	Install, Inspect, and Maintain Temporary Marker	7.5	0.5
CT15_1	Visually Inspect Surface Conditions of Right-Of-Way	5	0.33333333
CT16_1	Inspect Navigable Waterway Crossing	5	0.33333333
CT19_1	Valve Body Winterization or Corrosion Inhibition	5	0.33333333
CT19_2	Valve Lubrication	5	0.33333333
CT19_3	Valve Seat Sealing	12.5	0.83333333
CT19_4	Valve Stem Packing Maintenance	12.5	0.83333333

CT19_5	Adjust Actuator/Operator, Electric	7.5	0.5
CT19_6	Adjust Actuator/Operator, Pneumatic	7.5	0.5
CT19_7	Adjust Actuator/Operator, Hydraulic	7.5	0.5
CT20_0	Inspect Main-Line Valves	7.5	0.5
CT21_1	Repair Valve Actuator/Operator, Pneumatic	7.5	0.5
CT21_2	Disassemble and Reassemble Valves	7.5	0.5
CT21_3	Internal Inspection of Valves and their Components	7.5	0.5
CT21_4	Repair Valve Actuator/Operator, Hydraulic	7.5	0.5
CT21_5	Repair Valve Actuator/Operator, Electric	7.5	0.5
CT22_1	Inspect Tank Pressure/Vacuum Breakers	5	0.33333333
CT22_2	Inspect, Test, and Calibrate HVL Tank Pressure Relief Valves	5	0.33333333
CT23_1	Maintain and Repair Relief Valves	5	0.33333333
CT23_2	Inspect, Test, and Calibrate Relief Valves	5	0.33333333
CT24_1	Maintain and Repair Pressure Limiting Devices	5	0.33333333
CT24_2	Inspect, Test, and Calibrate Pressure Limiting Devices	5	0.33333333
CT25_1	Inspect, Test and Calibrate Pressure Switches	7.5	0.5
CT25_2	Inspect, Test and Calibrate Pressure Transmitters	7.5	0.5
CT26_0	Verify or Set Protection Parameters for Programmable Controllers and/or Other Instrumentation Control Loops	15	1
CT27_1	Routine Inspection of Breakout Tanks (API 653 Monthly or DOT Annual)	7.5	0.5
CT28_0	Provide Security for Pipeline Facilities	2.5	0.16666667
CT29_1	Launching In-Line Inspection Devices	2.5	0.16666667
CT29_2	Receiving In-Line Inspection Devices	5	0.33333333
CT30_0	Test Overfill Protective Devices	5	0.33333333
CT31_0	Inspect and Calibrate Overfill Protective Devices	7.5	0.5
CT32_0	Observation of Excavation Activities	5	0.33333333
CT33_1	Determine Allowable Line Pressure in Section of Pipe to be Moved	5	0.33333333
CT33_2	Preparation for Movement Activities	5	0.33333333
CT33_3	Moving In-Service Pipeline	5	0.33333333
CT34_0	Inspect Existing Pipe Following Movement	5	0.33333333
CT36_1	Safe Disconnect of Pipeline Facilities	5	0.33333333
CT36_2	Purging of Pipeline Facilities	5	0.33333333
CT36_3	Sealing a Disconnected Portion of Pipeline	5	0.33333333
CT37_0	Install or Repair Support Structures on Existing Aboveground Components	5	0.33333333

CT38_1	Visually Inspect Pipe and Pipe Components Prior to Installation	5	0.33333333
CT38_3	Visually Inspect that Welds Meet DOT Requirements (API 1104)	5	0.33333333
CT39_0	Backfilling a Trench Following Maintenance	5	0.33333333
CT40_1	Fit Full Encirclement Welded Split Sleeve	10	0.66666667
CT40_3	Apply Composite Sleeve	10	0.66666667
CT40_4	Install Mechanical Bolt-On Split Repair Sleeve	15	1
CT40_5	Install Weldable Compression Couplings	5	0.33333333
CT40_6	Install and Remove Plugging Machine	7.5	0.5
CT40_7	Installing a Tap 2 Inches and Under on a Pipeline System	15	1
CT40_8	Installing a Tap Larger Than 2 Inches on a Pipeline	15	1
CT40_9	Install and Remove Completion Plug on Pipelines Larger than 2 Inches	15	1
CT41_0	Conduct Pressure Test	15	1
CT42_	Welding	15	1
CT44_3	Inspect, Test and Maintain Flow Computer for Hazardous Liquid Leak Detection	7.5	0.5
CT44_4	Inspection, Testing and Perform Corrective and Preventative Maintenance of Tank Gauging for Hazardous Liquid Leak Detection	7.5	0.5
CT44_5	Prove Flow Meters for Hazardous Liquid Leak Detection	7.5	0.5
CT44_6	Maintain Flow Meters for Hazardous Liquid Leak Detection	7.5	0.5
CT44_7	Inspect, Test and Maintain Gravimeters/Densitometers for Hazardous Liquid Leak Detection	7.5	0.5
CT44_8	Inspect, Test and Maintain Temperature Transmitters for Hazardous Liquid Leak Detection	7.5	0.5
CT50_0	Purge Gas from a Pipeline	5	0.33333333
CT51_0	Purge Air from a Gas Pipeline	5	0.33333333
CT52_1	Conduct Vegetation Survey	5	0.33333333
CT52_2	Conduct a Leak Survey with a CGD	5	0.33333333
CT52_3	Conduct a Leak Survey with a Flame Ionization Unit	5	0.33333333
CT54_0	Test Remotely Controlled Shutdown Devices	5	0.33333333
CT55_0	Maintain Fixed Gas Detection Equipment	25	1.66666667
CT56_0	Perform Incremental Pressure Increases to Update the MAOP	5	0.33333333

CT57_0	Operate Odorant Equipment	5	0.33333333
CT58_0	Monitor Odorant Level	5	0.33333333
CT59_0	Vault Maintenance	10	0.66666667
CT63_1	Start-up of a Liquid Pipeline (Field)	5	0.33333333
CT63_2	Shutdown of a Liquid Pipeline (Field)	5	0.33333333
CT63_3	Monitor Pressures, Flows, Communications, and Line Integrity and Maintain Them Within Allowable Limits on a Liquid Pipeline System (Field)	15	1
CT63_4	Locally Operate Valves on a Liquid Pipeline System	5	0.33333333
CT64_1	Start-up of a Liquid Pipeline (Control Center)	5	0.33333333
CT64_2	Shutdown of a Liquid Pipeline (Control Center)	5	0.33333333
CT64_3	Monitor Pressures, Flows, Communications, and Line Integrity and Maintain Them Within Allowable Limits on a Liquid Pipeline System (Control Center)	5	0.33333333
CT64_4	Remotely Operate Valves on a Liquid Pipeline System	5	0.33333333
CT65_1	Start-up of a Gas Pipeline	5	0.33333333
CT65_2	Shutdown of a Gas Pipeline	5	0.33333333
CT65_3	Monitor Pressures, Flows, Communications and Line Integrity and Maintain Them Within Allowable Limits (Gas)	5	0.33333333
CT65_4	Manually or Remotely Open or Close Valves or Other Equipment	5	0.33333333
CTCC	Cold Cutting	10	0.66666667
CTFB	Flange Bolting	15	1
CTMP	Mud Plugging	5	0.33333333
CTTB	Tubing	7.5	0.5
CTTP	Threaded Pipe Fabrication	15	1
MT101	Introductory Skills for the Crew Leader	16	1.06666667
MT201	Orientation to the Job: Project Supervision	5	0.33333333
MT202	Human Relations and Problem Solving	20	1.33333333
MT203	Safety	7.5	0.5
MT204	Quality Control	5	0.33333333
MT205	Contract and Construction Documents	5	0.33333333
MT206	Document Control and Estimating	10	0.66666667
MT207	Planning and Scheduling	17.5	1.16666667
MT208	Resource Control and Cost Awareness	15	1