TPC TRAINING Curriculum Guide

Training solutions that turn potential into productivity

A TPC Consultant is ready to begin working with you to create a personalized training program. For more information or to schedule a training consultation, call **800-837-8872**, e-mail us at **info@tpctraining.com**, or visit us at **www.tpctraining.com**.

Download TPC Catalog of Course Descriptions

Core Competencies

* Indicates supporting instructor-led class available

Fundamentals	Electrical Systems*	Mechanical Systems*
101 - Reading Blueprints	200 - Basic Electricity and Electronics	300 - Basic Mechanics
102 - Reading Schematics and Symbols	202 - Batteries and DC Circuits	302 - Lubricants and Lubrication
103 - Mathematics in the Plant	203 - Transformers and AC Circuits	303 - Power Transmission Equipment
104 - Making Measurements	204 - Electrical Measuring Instruments	304 - Bearings
105 - Metals in the Plant	205 - Electrical Safety and Protection	305 - Pumps
106 - Materials in the Plant	206 - AC Motors and Controls	306 - Mechanical Systems
107 - Hand Tools	207 - Digital Motor Drives	307 - Basic Hydraulics
108 - Portable Power Tools	208 - Three Phase Systems	308 - Hydraulic Troubleshooting
109 - Industrial Safety and Health	209 - AC Control Equipment	309 - Basic Pneumatics
110 - Troubleshooting Skills	210 - Electrical Troubleshooting	310 - Pneumatic Troubleshooting
	211 - Electrical Safety for Non-Electricians (Understanding NFPA 70E)	

Foundations of Technology	Industrial Hazard Control	Machine Shop Practices
101 - Force and Motion	101 - Chemical Hazards	310 - Machine Shop Overview
102 - Measuring Time	102 - Physical Hazards	316 - Machine Shop Safety Operations
103 - Electrical Principles	103 - Personal Protective Equipment	317 - Machine Shop Shaping Operations
104 - Electrical Measurements	104 - Lockout/Tagout	318 - Machine Shop Drilling Operations
105 - Electrical Circuits	105 - Confined Spaces	319 - Machine Shop Turning Operations
106 - Electrical Components	106 - Hot Work	320 - Machine Shop Grinding Operations
107 - Electrical Power	107 - Hazard Communication	321 - Machine Shop Blueprint Analysis
108 - Electrical Troubleshooting	108 - Fall Protection	322 - Machine Shop Advanced Concepts
109 - Electrical Safety	109 - Ergonomics	323 - Machine Shop Math
110 - Electrical Troubleshooting	110 - Emergency Response	324 - Lathe & Grinding Work Between Centers
	111 - Emergency Response Plan	325 - Machine Shop Math & Check
	112 - Fire Safety	326 - Basic Milling Procedures
	113 - Hazardous Waste	327 - Advanced Milling Procedures
	114 - Hazardous Materials	328 - Multiple Machine Procedures

Machine Tool Series	Material Handling Systems	Packaging Machinery
161 - Measurements (workbook)	331 - Basic Handling Concepts	331 - Introduction to Packaging
162 - Basic Hand Tools (workbook)	341 - Mechanical Drive Maintenance	332 - Packaging Machinery
163 - Work Holding and Fixturing (workbook)	342 - Mechanical and Fluid Drive Systems	333 - Cartoning Machinery
164 - Metal Cutting Fundamentals (workbook)	343 - Bearings and Belt Drive Maintenance	
165 - Cutting Tools (workbook)	344 - Pumps, Installation and Maintenance	
166 - Cutting Tools (workbook)	345 - Maintenance of Pipefitting	
	346 - Valves and Valve System Maintenance	
	347 - Valve Maintenance and Piping System Protection	

Power Plant Operations	Process Control Instrumentation*	Process Control Systems	PLCs*	Robotics
111 - How Power Plants Work	271 - Introduction to Process Control	280 - Safety, Calibration, and Testing Methods	298 - Programmable Logic Controllers	301 - Introduction to Robotics
112 - Generating Steam in the Power Plant	272 - Pressure Measurement	281 - Analog and Discrete Measurement	299 - Industrial Rigging Principles and Practices	302 - Industrial Robot Technology
113 - Using Steam in the Power Plant	273 - Flow Measurement	282 - Flow Control Loop Operation	339 - Equipment Installation	303 - Introduction to Water Treatment
114 - Waste to Energy Fundamentals	274 - Level, Weight, and Motion Measurement	283 - Data Transmission		304 - Wastewater Treatment Processes
	275 - Flow Measurement	284 - Computers in Process Control		305 - Maintaining Wastewater Equipment
	276 - Level Measurement			416 - Blueprint Reading for Welders
	277 - Temperature Measurement			417 - Welding Principles
	278 - Analytical Instrumentation			418 - Oxyfuel Operations
	279 - Final Control Elements			419 - Arc Welding Operations

Welding*	Maintenance Management*
420 - Introduction to Maintenance Organization	
421 - Maintenance Planning and Scheduling	
422 - Implementing Preventive Maintenance	
423 - Condition Monitoring Resources	
424 - Improving Performance in Maintenance	
425 - Effective Communication for Supervisors	
426 - Managing Contractors	
427 - Managing a Training Program	

Specific Competencies

* Indicates supporting instructor-led class available

Air Conditioning and Refrigeration*	Ammonia Refrigeration	Building and Grounds Maintenance	Custodial Maintenance	Electronics	Energy Conservation
410 - The Refrigeration Cycle	460 - Ammonia Refrigeration Basics	360 - Introduction to Carpentry	430 - Cleaning Chemicals	250 - Semiconductors	270 - Energy Conservation Basics
412 - Refrigerants and Refrigerant Oils	462 - Positive Displacement Compressors	362 - Construction in the Building Shell	432 - Floors and Floor Care Equipment	252 - Power Supplies	277 - Energy Losses in Buildings
413 - Compressors	463 - Evaporators, Condensers, and Controls	363 - Finishing the Building Interior	433 - Restoration, Floors and Other Surfaces	253 - Amplifiers	278 - Heating/Cooling System Efficiency
414 - Condensers and Cooling Towers	464 - Piping	364 - Structural Framing	434 - Rest Room Care	254 - Oscillators	279 - Mechanical Energy Conservation
416 - Piping	465 - Ammonia Refrigerants	366 - Hand Bricklaying	435 - Carpet and Upholstery Care	291 - Digital Logic Systems	280 - Mechanical Energy Conservation
417 - Control Systems	466 - Absorption Chillers	367 - Preventive Systems Maintenance		292 - Digital Logic Applications	
418 - Air Handling Systems	467 - Fired Pumps	374 - Locks and Key Systems			
419 - System Troubleshooting	468 - Ammonia Systems	375 - Landscaping Maintenance			
441 - Heating Systems Basics	469 - Ammonia Safety				
442 - Heating System Equipment					

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421 - Maintenance Planning and Scheduling	
422 - Implementing Preventive Maintenance	
423 - Condition Monitoring Resources	
424 - Improving Performance in Maintenance	
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Typical Job Titles

	101 - Reading Blueprints	102 - Reading Schematics and Symbols	103 - Mathematics in the Plant	104 - Making Measurements	105 - Metals in the Plant	106 - Materials in the Plant	107 - Hand Tools	108 - Portable Power Tools	109 - Industrial Safety and Health	110 - Troubleshooting Skills	200 - Basic Electricity and Electronics	202 - Batteries and DC Circuits	203 - Transformers and AC Circuits	204 - Electrical Measuring Instruments	205 - Electrical Safety and Protection	206 - AC Motors and Controls	207 - Digital Motor Drives	208 - Three Phase Systems	209 - AC Control Equipment	210 - Electrical Troubleshooting	211 - Electrical Safety for Non-Electricians (Understanding NFPA 70E)	300 - Basic Mechanics	302 - Lubricants and Lubrication	303 - Power Transmission Equipment	304 - Bearings	305 - Pumps	306 - Mechanical Systems	307 - Basic Hydraulics	308 - Hydraulic Troubleshooting	309 - Basic Pneumatics	310 - Pneumatic Troubleshooting
Mechanical Systems Technician (Mechanic)																															
Multi-Craft Maintenance Technician																															
Millwright																															
Pipefitter																															
Lubricator/Oiler																															
Welder																															
Electrical Systems Technician (Electrician)																															
Electrical/Instrumentation Systems Technician																															
Instrumentation/Control Systems Technician																															
Facility/Building Maintenance Technician																															
Machinist/Tool & Die Maker																															
HVAC Technician																															
Refrigeration/Utilities Technician																															
Maintenance Lead/Supervisor																															

Recommendations are based upon training needs analyses throughout industry.

Enter your Job Functions below and the training courses needed

| | 410 - The Refrigeration Cycle | 412 - Refrigerants and Refrigerant Oils | 413 - Compressors | 414 - Condensers and Cooling Towers | 416 - Piping | 417 - Control Systems | 418 - Air Handling Systems | 419 - System Troubleshooting | 441 - Heating Systems Basics | 442 - Heating System Equipment | 460 - Ammonia Refrigeration Basics | 462 - Positive Displacement Compressors | 463 - Evaporators, Condensers, and Controls | 464 - Piping | 465 - Ammonia Refrigerants | 466 - Absorption Chillers | 467 - Fired Pumps | 468 - Ammonia Systems | 469 - Ammonia Safety | 360 - Introduction to Carpentry | 362 - Construction in the Building Shell | 363 - Finishing the Building Interior | 364 - Structural Framing | 366 - Hand Bricklaying | 367 - Preventive Systems Maintenance | 374 - Locks and Key Systems | 375 - Landscaping Maintenance | 430 - Cleaning Chemicals | 432 - Floors and Floor Care Equipment | 433 - Restoration, Floors and Other Surfaces | 434 - Rest Room Care | 435 - Carpet and Upholstery Care | 250 - Semiconductors | 252 - Power Supplies | 253 - Amplifiers | 254 - Oscillators | 291 - Digital Logic Systems | 292 - Digital Logic Applications | 270 - Energy Conservation Basics | 277 - Energy Losses in Buildings | 278 - Heating/Cooling System Efficiency | 279 - Mechanical Energy Conservation | 280 - Mechanical Energy Conservation | 101 - Force and Motion | 101 - Chemical Hazards | 102 - Physical Hazards | 103 - Personal Protective Equipment | 104 - Lockout/Tagout | 105 - Confined Spaces | 106 - Hot Work | 107 - Hazard Communication | 108 - Fall Protection | 109 - Ergonomics | 110 - Emergency Response | 111 - Emergency Response Plan | 112 - Fire Safety | 113 - Hazardous Waste | 114 - Hazardous Materials | 161 - Measurements (workbook) | 162 - Basic Hand Tools (workbook) | 163 - Work Holding and Fixturing (workbook) | 164 - Metal Cutting Fundamentals (workbook) | 165 - Cutting Tools (workbook) | 166 - Cutting Tools (workbook) | 331 - Basic Handling Concepts | 341 - Mechanical Drive Maintenance | 342 - Mechanical and Fluid Drive Systems | 343 - Bearings and Belt Drive Maintenance | 344 - Pumps, Installation and Maintenance | 345 - Maintenance of Pipefitting | 346 - Valves and Valve System Maintenance | 347 - Valve Maintenance and Piping System Protection | 331 - Introduction to Packaging | 332 - Packaging Machinery | 333 - Cartoning Machinery | 111 - How Power Plants Work | 112 - Generating Steam in the Power Plant | 113 - Using Steam in the Power Plant | 114 - Waste to Energy Fundamentals | 271 - Introduction to Process Control | 272 - Pressure Measurement | 273 - Flow Measurement | 274 - Level, Weight, and Motion Measurement | 275 - Flow Measurement | 276 - Level Measurement | 277 - Temperature Measurement | 278 - Analytical Instrumentation | 279 - Final Control Elements | 280 - Safety, Calibration, and Testing Methods | 281 - Analog and Discrete Measurement | 282 - Flow Control Loop Operation | 283 - Data Transmission | 284 - Computers in Process Control | 298 - Programmable Logic Controllers | 299 - Industrial Rigging Principles and Practices | 339 - Equipment Installation | 301 - Introduction to Robotics | 302 - Industrial Robot Technology | 303 - Introduction to Water Treatment | 304 - Wastewater Treatment Processes | 305 - Maintaining Wastewater Equipment | 416 - Blueprint Reading for Welders | 417 - Welding Principles | 418 - Oxyfuel Operations | 419 - Arc Welding Operations | 420 - Introduction to Maintenance Organization | 421 - Maintenance Planning and Scheduling | 422 - Implementing Preventive Maintenance | 423 - Condition Monitoring Resources | 424 - Improving Performance in Maintenance | 425 - Effective Communication for Supervisors | 426 - Managing Contractors | 427 - Managing a Training Program |
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