

Facility/Building Maintenance Apprentice - Suggested Courses

Companies use TPC's Training Needs Analysis to implement highly successful technical skills training for apprenticeship programs. These programs are tailored precisely to the needs of their plants/facilities and maintenance workforce. We've organized the results of these analyses into job/craft-specific apprenticeship curricula for a variety of maintenance positions. Each curriculum includes those TPC courses most frequently selected by organizations like yours to meet the performance goals for their maintenance apprentices.

The suggested curricula provide a proven starting point for planning your own apprenticeship programs. TPC can help fine-tune your program for your unique workforce requirements using our copyrighted Training Needs Analysis process—it's simple, accurate, and only takes a few hours.



Facility/Building Maintenance Apprentice Curriculum

The suggested curriculum for Facility/Building Maintenance Apprentices includes 94 technical skills courses. Each course contains 5-12 detailed, topic-specific lessons for a total of 630 lessons in this curriculum. The subject matter ranges from fundamental knowledge required by an entry-level apprentice to advanced competencies for your senior apprentices.

Fundamentals

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| 101 - Reading Blueprints | 106 - Nonmetals in the Plant |
| 102 - Reading Schematics & Symbols | 107 - Hand Tools |
| 103 - Mathematics in the Plant | 108 - Portable Power Tools |
| 104 - Making Measurements | 109.1 - Industrial Safety & Health |
| 105 - Metals in the Plant | 110 - Troubleshooting Skills |

Electrical Systems

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| 201 - Basic Electricity & Electronics | 207 - Single-Phase Motors |
| 202 - Batteries & DC Circuits | 208 - Three-Phase Systems |
| 203 - Transformers & AC Circuits | 209 - AC Control Equipment |
| 204.1 - Electrical Measuring Instruments | 210 - Electrical Troubleshooting |
| 205.1 - Electrical Safety & Protection | 211 - Electrical Safety in the Workplace—
Understanding NFPA 70E® |

Mechanical Systems

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| 301 - Basic Mechanics | 305 - Pumps |
| 302 - Lubricants and Lubrication | 306 - Piping Systems |
| 303.1 - Power Transmission Equipment | 309 - Basic Pneumatics |
| 304 - Bearings | 310 - Pneumatic Troubleshooting |

Mechanical Maintenance Applications

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| 341 - Mechanical Drive Maintenance | 345 - Maintenance Pipefitting |
| 342 - Mechanical & Fluid Drive Systems | 346 - Tubing & Hose System Maintenance |
| 343 - Bearing & Shaft Seal Maintenance Protection | 347 - Valve Maintenance/Piping System |
| 344 - Pump Installation & Maintenance | |

Rigging & Equipment Installation

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| 318 - Industrial Rigging | 319 - Equipment Installation |
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Energy Conservation

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| 376 - Energy Conservation Basics | 379 - Mechanical Energy Conservation |
| 377 - Energy Losses in Buildings | 380 - Electrical Energy Conservation |
| 378 - Heating/Cooling System Efficiency | |

Water/Wastewater Treatment

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| 381 - Introduction to Water Technology | 382 - Wastewater Treatment Processes |
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Welding

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| 416 - Blueprint Reading for Welders | 418 - Oxyfuel Operations |
| 417 - Welding Principles | 419 - Arc Welding Operations |

Air-Conditioning & Refrigeration Systems

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| 431 - The Refrigeration Cycle | 438 - Air-Handling Systems |
| 432 - Refrigerants & Refrigerant Oils | 439 - System Troubleshooting |
| 433 - Compressors | 440 - Absorption Chillers |
| 434 - Evaporators & Metering Devices | 441 - Heat Pumps |
| 435 - Condensers & Cooling Towers | 442 - Heating System Basics |
| 436 - Piping | 443 - Heating System Equipment |
| 437 - Control Systems | |

Building and Grounds Maintenance

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| 361 - Introduction to Carpentry | 367 - Plumbing Systems Maintenance |
| 362 - Constructing the Building Shell | 374 - Locks & Key Systems |
| 363 - Finishing the Building Interior | 375 - Landscaping Maintenance |
| 366 - Flat Roof Maintenance | |

Custodial Maintenance

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| 451 - Cleaning Chemicals | 454 - Rest Room Care |
| 452 - Floors & Floor Care Equipment | 455 - Carpet & Upholstery Care |
| 453 - Maintaining Floors & Other Surfaces | |

Electronics

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| 251 - Semiconductors | 254 - Oscillators |
| 252 - Power Supplies | 291 - Digital Logic Systems |
| 253 - Amplifiers | |

Industrial Hazard Control

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| 151 - Chemical Hazards |
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Machine Shop Practices

315 - Machine Shop Practice

Material Handling Systems

331 - Bulk-Handling Conveyors

Power Plant Operations

111 - How Power Plants Work	113 - Using Steam in the Power Plant
112 - Generating Steam in the Power Plant	114 - Waste-to-Energy Fundamentals

Process Control Instrumentation

273 - Pressure Measurement	276 - Level Measurement
275 - Flow Measurement	

PLCs

298 - Programmable Logic Controllers

Additional Suggested TPC Apprentice Curricula

Electrical/Instrumentation Systems	Mechanical Systems
Electrical Systems	Millwright
HVAC	Multi-Craft Maintenance
Instrumentation/Control Systems	Pipefitter
Lubricator/Oiler	Refrigeration/Utilities
Machinist/Tool & Die Maker	Welder