Industrial Maintenance



Job Titles

Facilities Manager (O*Net: 11-3051)

Plant Engineer (O*Net: 17-2199)

Education and Training

On-thejob

Four-Year Degree*

Industry Recognized Credentials

SME Credential: CmfgT

Average Wages

\$25.00 per hour and ur

Electronics / Instrumentation Technician (O*Net: 49-2094

or 49-9069)

Supervisor (O*Net: 49-1011)

Maintenance

Millwright (O*Net: 49-9044) Specific technical training and/or extensive work experience

Vendor Specific Credential, such as SOLIDWORKS, Rockwell, Siemens

\$23-35.00 per hour

Multi-Craft Maintenance Technician (O*Net: 49-9071)

Registered Apprenticeship / Associates Degree

4-6 add'l NIMS Industrial Technology Maintenance

\$15-30.00 per hour (Increases with years on the job)

Maintenance Technician (O*Net: 49-9071 / 49-2094)

Adult CTE certificate (1-year) or community college certificate

NIMS Basic Mechanical Systems / Electrical Systems

\$15-22.00 per hour (increases with years on the job)

Preventive Maintenance Technician

(O*Net: 49-9071)

HS Diploma, GED, some technical training

NIMS Maintenance Operation MSSC, OSHA 10, NCRC

\$12-17.00 per hour

^{*}Credits from Career and Technical Center and Community College Programs may not articulate into BS degrees at 4-year universities.

^{*}CTE: Career and Technical Education

ERMP Industrial Maintenance Career Pathway (DRAFT)

All levels: Foundational employability skills, basic math and computer skills, written and verbal communication skills; safety awareness

■ Preventive Maintenance Technician Competencies and Credentials:

- Industrial math
- Perform Lock-out/Tag-out Procedures
- Read and understand preventive maintenance manuals
- Recognize elements of an assembly drawing
- Read multi-meters and measure voltage, current, and resistance in an electrical circuit
- Interpret machine operations and maintenance documentation
- Perform machine predictive preventative maintenance
- Demonstrate proper use of instruments and hand tools for equipment maintenance and inspection
- Properly lubricate machines in accordance with maintenance schedules
- Manufacturing Skill Standards Council (MSSC) Certified Production Technician
- WorkKeys National Career Readiness Certificate (NCRC)
- OSHA 10
- NIMS Maintenance Operations

Maintenance Technician Competencies and Credentials:

- All competencies in Preventive Maintenance Technician, plus:
- Safely move and store materials and equipment
- Adhere to mechanical power transmission / electrical power and control system safety rules
- Use dimensional measurement tools
- Install and align power transmission systems, gear drives, and bearings
- Properly use hand tools for equipment troubleshooting activities
- Interpret electrical control and power schematics
- Adjust limit switches and electronic systems
- Select, install, and test AC and DC electric motors
- Install and test electrical components and circuits
- Troubleshoot a solenoid-operated fluid power relay control circuit
- Replace electrical control wiring using terminal or solder attachments
- NIMS Basic Mechanical Systems
- NIMS Electrical Systems

■ Multi-craft Maintenance Technician

- All competencies included in Maintenance Technician, plus:
- General knowledge of PLC and Ladder Logic
- Advanced knowledge of electrical schematics
- Troubleshoot advanced maintenance issues and complete complex repairs
- NIMS Basic Hydraulic Systems
- NIMS Pneumatic Systems
- NIMS Electronic Control Systems
- NIMS Process Control Systems
- NIMS Maintenance Welding
- NIMS Maintenance Piping

Specialized Tracks Competencies and Credentials

- All competencies included in Multi-Craft Maintenance Technician, plus specialization in one or more of the following:
- Computers and electronics
- Robotics and automation
- Robotics welding
- Precision Instrumentation
- Heavy equipment installation, maintenance, and repair
- Rigging and crane operation
- Leadership and Project Management
- Vendor specific credentials such as SOLIDWORKS or Siemens (as needed)

Management & Engineering Competencies and Credentials

- All competencies associated with other levels of the pathway, plus:
- Knowledge of math, physics, statistics, etc.
- Product/Process Design; Quality Control/Assurance
- Automated Systems and Control
- Management
- Society of Manufacturing Engineers (SME) Certified Manufacturing Technician (CMfgT)