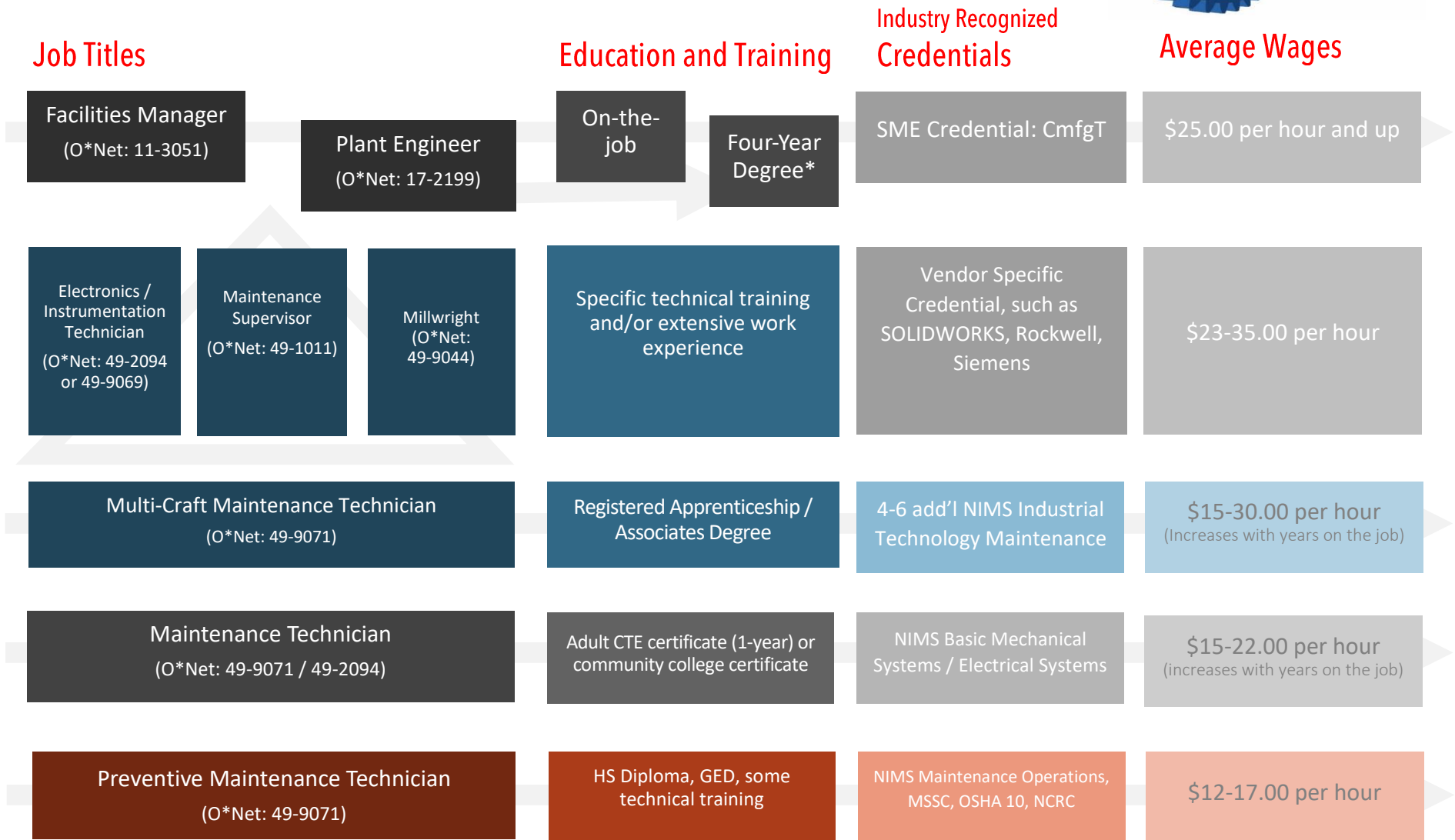


Industrial Maintenance



*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

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)**