

Manufacturing Technology and Processes

Blueprint & GD&T

- Blue Print Reading
- Blue Print Reading and Schematics and Metrology
- GD&T and Metrology
- GD&T for Design
- Geometric Dimensioning and Tolerancing (GD&T)
- Shop Math and Blueprint Reading

Computer Numerical Control (CNC)

- Basic G code
- Basic M code
- CNC Machine Operation
- CNC Machine Setup
- CNC Programming
- CNC Tooling
- CNC Tube Bending Design
- Computer Literacy
- Manual Lathe
- Manual Mill
- MasterCam
- Siemens CNC-D Series Controls

Electrical

- AC/DC Electrical Diagrams, Components, Test Equipment and Troubleshooting
- AC/DC Electronics
- Arc Flash
- Cables and Wires
- Electrical Print Reading
- Electrical Troubleshooting
- Electricity and Electronics Fundamentals
- Electromagnetic Compatibility (EMC)
- Medium Voltage Circuit Breaker Maintenance
- Motor Controls and Relay Logic Circuits
- Optimizing Speed and Feeds
- Power Generation Protective Relay Maintenance
- Power Transmission
- Process Control Fundamentals
- Protective Relay Maintenance
- Smart Grid Power Distribution

Hydraulic/Pneumatic

- Automotive Fundamentals
- Fluid Power
- Hydraulics Fundamentals
- Pipefitting
- Pipefitting and Tube Bending
- Pneumatic Gage
- Pneumatics and Hydraulics
- Pneumatics Fundamentals

Manufacturing Quality

- 5S
- CMMI
- Design for Manufacturability (DFM)
- Error Proofing of the Assembly
- Excel for Industry: Developing SPC, GRR, Capability Template, Scrap
- Kanban
- Lean Manufacturing (FMEA)
- Measurement Uncertainty
- Poka Yoke Processes
- Principles of Manufacturing
- Process Optimization
- Quality
- Root Cause Analysis
- Statistical Process Control (SPC)



Manufacturing Technology and Processes (continued)

Mechanical

- Advanced Precision Measuring Instruments
- Basic Mechanical Concepts
- Boiler Plant Operations and Maintenance
- Conveyor Transfer Systems
- Cranes and Hoists
- Fans and Blowers
- Fork Lift
- Hand Tools
- HVAC/R
- Industrial Vacuum Technology
- Injection Mold Process
- Lubrication Systems
- Machine Tool
- Maintenance and Repair
- Mechanical Systems and Drives
- Mechanical Systems and Drives and Power Transmission
- Mechatronics Curriculum
- Piercing Fixtures
- Precision Measuring Instruments
- Predictive and Preventative Maintenance
- Pump Repair
- Pumps, Seals, Bearings and Lubrication
- Rigging and Machine Leveling
- Rigging and Winch Equipment
- Rigging/Heavy Truck
- Shaft Alignment
- Sheet Metal Fabrication
- Skilled Trades Mathematics
- Thermoforming
- Welding and Certifications

Millwright Basics Program (400 hrs.)

- AC/DC Electrical Fundamentals
- Basic Industrial Safety
- Basic Shop Math
- Blueprint Reading/Schematics and Metrology
- Fluid Power Fundamentals
- Machine Tool Basics
- Mechanical Drives/Power Transmission
- Rigging, Shaft Alignment and Machine Lev-



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- Welding and Fabrication Basics

MSSC Certified Production Technician (CPT) Curriculum

- Maintenance Awareness
- Manufacturing Processes & Production
- Quality Practices & Measurement
- Safety

NCCER Trades Training

- Carpentry
- Construction & Maintenance (Numerous Topics)
- Construction Craft Laborer
- Construction Project Supervision
- Core Curriculum
- Drywall
- Electrical Industrial
- Heavy Equipment Construction
- HVAC
- Industrial Maintenance Mechanic
- Insulation
- Ironworking
- Masonry
- Millwright
- Painting
- Plumbing/Pipefitting
- Sheet Metal

Manufacturing Technology and Processes (continued)

PLC

- PLC and Communication Devices
- PLC, Communication Devices and Power Transmission
- PLC and Control – RS Logix 5000
- PLC Fundamentals
- PLC Maintenance and Troubleshooting – RSLogix 5000
- PLC Program Design
- PLC Programming Software AB, Siemens, Mitsubishi etc.
- PROFIBUS and NET PRO Introduction
- RS LOGIX5000 and Communications
- Siemens SIMATIC S5 to S7
- Siemens SIMATIC S7 and Communication Devices

Process Technology (Oil & Gas)

- Computer Applications
- Instrumentation Systems
- Pipeline Operations
- Pipeline Production
- Process Systems
- Quality and Safety
- Refining and Pet-

rochemical Industry Equipment

Robotics

- Fanuc Operations and Spot Tool Programming
- Robotics
- Robotics: Advanced Fanuc Operations and Programming
- Robotics: Electrical Trouble shooting
- Robotics: Mechanical Troubleshooting
- Robotics: Operations and Programming
- Robots Operation: Mechanical and Electrical Troubleshooting
- Robotic or Manual Sealant Applications: Urethane, Adhesive, Foam

