



APPRENTICESHIP PROGRAM OUTLINE

MANUFACTURING ENGINEERING TECHNICIAN WORK PROCESSES & SKILLS

The term of the apprenticeship will be based on the apprentice's completion and on-the-job demonstration of the professional competencies outlined in the work processes. Apprentices must demonstrate competency in a minimum of **87.5%** of the listed competencies prior to completing the program. If training employers identify specific competencies that cannot be tested on the job, the apprenticeship committee will approve and provide instruction and testing that ensures the competencies have been met. Registered Apprentices will perform work and are required to demonstrate competencies in the following skills:

Work Processes & Skills

- Design new equipment or materials or recommend revision to methods of operation, material handling, equipment layout, or other changes to increase production or improve standards.
- Test selected products at specified stages in the production process for performance characteristics or adherence to specifications.
- Compile and evaluate statistical data to determine and maintain quality and reliability of products.
- Study time, motion, methods, or speed involved in maintenance, production, or other operations to establish standard production rate or improve efficiency.
- Interpret engineering drawings, schematic diagrams, or formulas for management or engineering staff.
- Read worker logs, product processing sheets, or specification sheets to verify that records adhere to quality assurance specifications.
- Verify that equipment is being operated and maintained according to quality assurance standards by observing worker performance.
- Evaluate data and write reports to validate or indicate deviations from existing standards.
- Recommend modifications to existing quality or production standards to achieve optimum quality within limits of equipment capability.
- Aid in planning work assignments in accordance with worker performance, machine capacity, production schedules, or anticipated delays.
- Operate industrial hygiene equipment in manufacturing environments to reduce exposure to environmental contaminants.
- Prepare charts, graphs, or diagrams to illustrate workflow, routing, floor layouts, material handling, or machine utilization.
- Evaluate industrial operations for compliance with permits or regulations related to the generation, storage, treatment, transportation, or disposal of hazardous materials or waste.
- Apply statistical quality control procedures to production test data.
- Order and purchase manufacturing equipment for production operations.

REGISTERED WITH:





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Apprentices must Complete Coursework Aligned with Manufacturing and/or Machining Technology, Production Technician, and/or Engineering Technology pathways. Through consultation with the Apprenticeship Committee, the Local Education Agency, and the indenturing employer, apprentices will select an applicable program of study/course track and complete a minimum of **144 hours** of related instruction per year of apprenticeship. Prior applicable education and training will be credited towards completion of related education requirements and apprentices will be offered tracks advancing their technical aptitude in the profession.

Related Instruction Content May Include

LEAN MANUFACTURING	INDUSTRIAL CONTROL SOFTWARE
5S OPERATIONS	COOPERATIVE WORK EXPERIENCE (1-16 UNITS)
ANALYTICAL OR SCIENTIFIC SOFTWARE	GRAPHICS OR PHOTO IMAGING SOFTWARE
COMPUTER AIDED DESIGN CAD SOFTWARE	COMPUTER AIDED MANUFACTURING CAM SOFTWARE
OFFICE SUITE SOFTWARE	DATABASE USER INTERFACE AND QUERY SOFTWARE
PRESENTATION SOFTWARE	ENTERPRISE RESOURCE PLANNING ERP SOFTWARE
PROJECT MANAGEMENT SOFTWARE	SPREADSHEET SOFTWARE

REGISTERED WITH:



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