

## OJT CORE COMPETENCIES

# Industrial Engineering Technician

### TERM OF APPRENTICESHIP

The term of the apprenticeship is 3 years.

### APPRENTICESHIP APPROACH

Time-based

Competency-based

Hybrid

*Apprenticeships may be time-based, requiring a set number of OJT (on-the-job training) and RTI (related technical instruction) hours; competency-based, allowing completion once all skills are mastered; or hybrid, blending both time and competency requirements.*

### SCHEDULE AND CHECKLIST

Essential Job Categories	Competencies
Safety	<ul style="list-style-type: none"><li>• Describe actions to take in the event of accidents, falls, and health emergencies</li><li>• Use Personal Protective Equipment (PPE) and test their functionality</li><li>• Review emergency evacuation plans</li><li>• Evaluate industrial operations for compliance with permits or regulations related to the generation, storage, treatment, transportation, or disposal of hazardous materials or waste</li><li>• Adhere to all applicable regulations, policies, and procedures for health, safety, and environmental compliance</li><li>• Employer-specific competency</li></ul>
Engineering and Technology	<ul style="list-style-type: none"><li>• Study time, motion, methods, or speed involved in maintenance, production, or other operations to establish standard production rate or improve efficiency</li><li>• Assist engineers in developing, building, or testing prototypes or new products, processes, or procedures</li><li>• Conduct statistical studies to analyze or compare production costs for sustainable and non-sustainable designs</li><li>• Employer-specific competency</li></ul>
Mechanical Systems	<ul style="list-style-type: none"><li>• Inspect, troubleshoot, and maintain mechanical systems and components to ensure optimal performance</li><li>• Calibrate or adjust equipment to ensure quality production, using tools such as calipers, micrometers, height gauges, protractors, or ring gauges</li><li>• Oversee equipment start-up, characterization, qualification, or release</li><li>• Select cleaning materials, tools, or equipment</li><li>• Set up and operate production equipment in accordance with current manufacturing practices and standard operating procedures</li><li>• Employer-specific competency</li></ul>

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Production Management	<ul style="list-style-type: none"><li>• Develop successful workflow, adapt to changing conditions, and develop new equipment, procedures, and policies to increase efficiency in operations</li><li>• Aid in planning work assignments in accordance with worker performance, machine capacity, production schedules, or anticipated delays</li><li>• Analyze, estimate, or report production costs</li><li>• Coordinate equipment purchases, installations, or transfers</li><li>• Identify opportunities for improvements in quality, cost, or efficiency of automation equipment</li><li>• Monitor and adjust production processes or equipment for quality and productivity</li><li>• Oversee or inspect production processes</li><li>• Recommend corrective or preventive actions to assure or improve product quality or reliability</li><li>• Select material quantities or processing methods needed to achieve efficient production</li><li>• Employer-specific competency</li></ul>
Quality Assurance	<ul style="list-style-type: none"><li>• Read worker logs, product processing sheets, or specification sheets to verify that records adhere to quality assurance specifications</li><li>• Test selected products at specified stages in the production process for performance characteristics or adherence to specifications</li><li>• Compile and evaluate statistical data to determine and maintain quality and reliability of products</li><li>• Employer-specific competency</li></ul>
Technical Communication	<ul style="list-style-type: none"><li>• Read blueprint documents and other complicated diagrams of the following nature and apply understanding of that information to assigned tasks</li><li>• Create or interpret engineering drawings, schematic diagrams, formulas, or blueprints for management or engineering staff</li><li>• Prepare production documents, such as standard operating procedures, manufacturing batch records, inventory reports, or productivity reports</li><li>• Employer-specific competency</li></ul>

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Technical Mathematics	<ul style="list-style-type: none"><li>• Apply skills from the following math disciplines to assigned tasks: algebra, geometry, trigonometry, statistics</li><li>• Employer-specific competency</li></ul>
Metrology	<ul style="list-style-type: none"><li>• Identify and use appropriate measuring tools</li><li>• Employer-specific competency</li></ul>



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