

# MACHINING CAREER PATHWAY



<b>\$37,662</b>	<b>PRODUCTION TECHNICIAN</b>	<b>\$41,128</b>	<b>MACHINIST 1</b>	<b>\$61,809</b>	<b>ENGINEERING TECHNOLOGIST</b>	<b>\$59,882</b>	<b>CNC PROGRAMMER</b>	<b>\$70,087</b>	<b>MACHINE SHOP SUPERVISOR</b>	<b>\$86,326</b>	<b>MANUFACTURING ENGINEER</b>				
Short-term Certification Pre- Apprenticeship at Community College Certificate/Tech Centers		One-Year Technical Certification, Apprenticeship and/or Extensive Work Experience		One-Year Technical Certification, Apprenticeship and/or Extensive Work Experience		Bachelors Degree		Bachelors Degree		Bachelors Degree					
<b>Job requirements include:</b>  Foundational employability skills • Basic math • Basic computer skills • Written and verbal communication skills • Safety awareness • Drug free		<b>Job requirements include:</b>  Basic geometry and trigonometry • Ability to machine parts from blueprints (manual & CNC) • Manual: Execute machining of parts, set appropriate feeds and speeds • CNC: G-Code & smart machining processes		<b>Job requirements include:</b>  Advanced trigonometry • Interpret all types of blueprints • Make complex setups using optimal settings for efficiency • Run lathes, mills, CNC & manual • Train and mentor operators & entry-level machinists		<b>Job requirements include:</b>  Leadership • Communication skills • Machining Skills listed in previous job operations • Foundational employability skills • Written communication skills		<b>Job requirements include:</b>  Write programs to meet specifications of blueprints, job orders • Monitor and correct machine programs for errors • Provide written and verbal instructions for machine operators		<b>Job requirements include:</b>  Determine sequence of machine operations and appropriate machine tools • Interpret engineering drawings • Plan workflow, oversee production process		<b>Job requirements include:</b>  Company competencies • Additional company training • Leadership skills • Communication skills • Previously listed/learned skills		<b>Job requirements include:</b>  Advanced technical understanding of manufacturing processes • Provide technical expertise to machining staff • Troubleshoot and investigate production problems and errors • Continuous improvement methodology to machining processes	
<b>\$39,834</b>		<b>\$53,482</b>		<b>\$53,482</b>		<b>\$61,809</b>		<b>\$59,882</b>		<b>\$70,087</b>		<b>\$86,326</b>			
<b>MACHINE OPERATOR</b>		<b>MACHINIST 2</b>		<b>TEAM LEAD</b>		<b>ENGINEERING TECHNOLOGIST</b>		<b>CNC PROGRAMMER</b>		<b>MACHINE SHOP SUPERVISOR</b>		<b>MANUFACTURING ENGINEER</b>			
<b>Job requirements include:</b>  Demonstrates use of machine safety and PPE • Inspect materials and parts • Maintain milling/turning equipment • Operates presses, grinders, hones		<b>Job requirements include:</b>  Advanced trigonometry • Interpret all types of blueprints • Make complex setups using optimal settings for efficiency • Run lathes, mills, CNC & manual • Train and mentor operators & entry-level machinists		<b>Job requirements include:</b>  Leadership • Communication skills • Machining Skills listed in previous job operations • Foundational employability skills • Written communication skills		<b>Job requirements include:</b>  Write programs to meet specifications of blueprints, job orders • Monitor and correct machine programs for errors • Provide written and verbal instructions for machine operators		<b>Job requirements include:</b>  Determine sequence of machine operations and appropriate machine tools • Interpret engineering drawings • Plan workflow, oversee production process		<b>Job requirements include:</b>  Company competencies • Additional company training • Leadership skills • Communication skills • Previously listed/learned skills		<b>Job requirements include:</b>  Advanced technical understanding of manufacturing processes • Provide technical expertise to machining staff • Troubleshoot and investigate production problems and errors • Continuous improvement methodology to machining processes			
Entry-Level High School Diploma		One-Year Technical Certificate or Apprenticeship		One-Year Technical Certificate or Apprenticeship		Previous education requirements as well as: On-the-job training / Associate Degree and Bachelor's Degree		Previous education requirements as well as: On-the-job training / Associate Degree and Bachelor's Degree		Previous education requirements as well as: On-the-job training / Associate Degree and Bachelor's Degree		Previous education requirements as well as: On-the-job training / Associate Degree and Bachelor's Degree			

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# INDUSTRIAL MAINTENANCE CAREER PATHWAY



<b>\$37,662</b>	<b>PRODUCTION TECHNICIAN</b>	<b>\$50,946</b>	<b>MULTI-CRAFT MAINTENANCE TECHNICIAN</b>	<b>\$60,255</b>	<b>FOREMAN GROUP LEAD</b>	<b>\$59,466</b>	<b>ELECTRONICS/ INSTRUMENTATION TECHNICIAN</b>	<b>\$61,809</b>	<b>ENGINEERING TECHNICIAN</b>	<b>\$70,087</b>	<b>MAINTENANCE SUPERVISOR</b>	<b>\$101,028</b>	<b>PLANT ENGINEER</b>	<b>\$101,028</b>	<b>FACILITIES MANAGER SUPERINTENDENT</b>	
<p>Adult CTE certification (1-year) or Community College Certificate</p>						<p>Previous education requirements as well as: Specific Technical Training and/or Extensive Work Experience</p>										
<p><b>Job requirements include:</b></p> <ul style="list-style-type: none"> <li>Operate and care for tools and equipment including: hand tools, measuring devices, and precision instruments</li> <li>Comfortable in a manufacturing environment</li> </ul>	<b>\$48,664</b>	<p><b>Job requirements include:</b></p> <ul style="list-style-type: none"> <li>Adhere to mechanical power transmission/ electrical and control system safety rules</li> <li>Install and align power transmission system, gear drivers, and bearings</li> <li>General knowledge of PLC and Ladder Logic</li> </ul>	<p><b>Job requirements include:</b></p> <ul style="list-style-type: none"> <li>Leadership and Communication Skills</li> <li>Adjust limit switches and electronic systems</li> <li>Select, install, and test AC and DC electric motors</li> <li>Replace electrical control wiring using terminal or solder attachments</li> </ul>	<p><b>Job requirements include:</b></p> <ul style="list-style-type: none"> <li>Computers and electronics</li> <li>Robotics and Automation</li> <li>Robotics Welding</li> <li>Precision Instrumentation</li> <li>Heavy equipment installation, alignment, maintenance and repair</li> <li>Process Manufacturing</li> </ul>	<p><b>Job requirements include:</b></p> <ul style="list-style-type: none"> <li>Robotics and Automation</li> <li>Heavy equipment installation, alignment, maintenance and repair</li> <li>Process Manufacturing</li> </ul>	<p><b>Job requirements include:</b></p> <ul style="list-style-type: none"> <li>Rigging and Crane Operation</li> <li>Leadership and project management; ability to serve as a team leader</li> <li>Troubleshoot advanced maintenance issues and complete complex repairs</li> </ul>	<p><b>Job requirements include:</b></p> <ul style="list-style-type: none"> <li>Knowledge of math, physics, statistics and others</li> <li>Product/Process Design</li> <li>Quality Control/ Assurance</li> <li>Automated Systems and Control</li> </ul>	<p><b>Job requirements include:</b></p> <ul style="list-style-type: none"> <li>Ability to manage teams</li> <li>Ability to manage operations, budgets and more</li> <li>Credentials as required by employer</li> <li>All previous requirements</li> </ul>								
<p>Entry-Level</p> <p>High School Diploma/GED</p>	<p><b>PREVENTIVE MAINTENANCE TECHNICIAN</b></p> <p><b>Job requirements include:</b></p> <ul style="list-style-type: none"> <li>Basic Welding Materials handling, rigging, crane operation maintenance, and safety</li> <li>Machine Maintenance</li> <li>Read multimeter and measure voltage, current, and resistance</li> </ul>	<p>Associate Degree or Apprenticeship</p>									<p>Previous education requirements as well as: On-the-job training / Bachelor's Degree</p>					

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# AUTOMATION & ROBOTICS CAREER PATHWAY



<b>\$41,850</b>	<b>MANUFACTURING ASSOCIATE</b>	<b>\$51,158</b>	<b>ROBOTICS TECHNICIAN</b>	<b>\$87,921</b>	<b>ROBOTICS INTEGRATOR</b>	<b>\$87,921</b>	<b>ROBOTICS ENGINEER</b>
High School Diploma/GED, some technical training, & industry recognized credentials		Associate Degree with continued upskilling towards Bachelor's, additional industry recognized technical credentials and on-the-job training		Bachelor's degree in engineering/technology plus work experience, on-the-job training with embedded industry recognized technical credentials			
<b>\$48,796</b>	<b>ROBOTICS OPERATOR</b>	<b>\$65,977</b>	<b>ROBOTICS SPECIALIST</b>	<b>\$65,977</b>	<b>ROBOTICS TECHNOLOGIST</b>		
<b>Job requirements include:</b>		<b>Job requirements include:</b>		<b>Job requirements include:</b>		<b>Job requirements include:</b>	
<ul style="list-style-type: none"> <li>Practice and demonstrate knowledge of essential safety skills</li> <li>•</li> <li>Understand variety of manufacturing processes, including gear drivers, machine tooling and operations, production planning, workflow and control</li> <li>•</li> <li>Knowledge of quality systems and continuous improvement practices</li> <li>•</li> <li>Execute basic and precise measurement methods and tools</li> </ul>		<ul style="list-style-type: none"> <li>Troubleshoot, maintain, and repair robots or related equipment</li> <li>•</li> <li>Install and troubleshoot programmable logic controllers (PLC's)</li> <li>•</li> <li>Align, fit and assemble components</li> <li>•</li> <li>Use hand tools, power tools, mechanical fasteners, and lubrication materials</li> <li>•</li> <li>Use fundamental, applied math, including algebra, measurements, geometry, and trigonometry</li> </ul>		<ul style="list-style-type: none"> <li>Install, align, troubleshoot, and maintain robotics systems</li> <li>•</li> <li>Interpret, measure, install, adjust, troubleshoot, and repair or replace components of electrical systems</li> <li>•</li> <li>Program and maintain PLC's Program advanced robotics and vision systems</li> <li>•</li> <li>Use augmented reality to troubleshoot</li> </ul>		<ul style="list-style-type: none"> <li>Robotics Specialist skills</li> <li>•</li> <li>Practice predictive maintenance: use and analyze data provided by the system to anticipate and correct problems</li> <li>•</li> <li>Understand procedures for identifying and managing hazards (risk assessment), including examining the work environment to identify processes and procedures all employees must follow</li> </ul>	
High School Diploma, Technical Training, Manufacturing Foundations Certificate, Short-term Earn and Learn		Vocational training, or on-the-job training with industry recognized technical credentials or an Associate Degree		Bachelor's degree in engineering/technology plus work experience, on-the-job training with embedded industry recognized technical credentials			

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# WELDING CAREER PATHWAY



<b>\$37,662</b>	Short-term Certification Pre-Apprenticeship at Community College Credentials/Tech Centers		<b>\$41,580</b>	Completed Apprenticeship/ Extensive on-the-job training	<b>\$46,013</b>	<b>\$48,482</b>	<b>\$52,102</b>	Bachelor's Degree (ABET accredited)
<b>PRODUCTION TECHNICIAN</b>			<b>WELDER 1</b>		<b>MAINTENANCE WELDER</b>	<b>WELD - FITTER</b>	<b>WELDING INSPECTOR QUALITY ASSURANCE</b>	
Job requirements include:	<b>\$47,743</b>	<b>\$47,743</b>	Job requirements include:	<b>\$52,102</b>	Job requirements include:	Job requirements include:	Job requirements include:	<b>\$88,801</b>
Foundational employability skills • Basic math • Basic computer skills • Written and verbal communication skills • Safety awareness • Drug free	<b>WELD OPERATOR</b>	<b>ROBOTIC WELD TECHNICIAN</b>	Basic welding processes (SMAW, SAW, FCAW, GTAW) • Set-up, operate, and maintain welding equipment • Identify electrode or welding wire • Fillet and groove weld plate in designated positions • Weld pipe in the vertical and horizontal positions	<b>WELDER 2</b>	Weld-fitter & welding inspector quality assurance skills • Troubleshoot and correct process errors and equipment issues • Inspect welding staff work product	Maintenance welder & welding inspector quality assurance skills • Layout stock from blueprints, sketches, and templates • Set-up and target piping assemblies	Maintenance welder & weld-fitter skills • Drill, ream, countersink, counter-bore, spot face, tap holes using portable equipment • Oversee destructive and nondestructive testing	<b>WELDING ENGINEER</b>
High School Diploma/GED, some technical training, Manufacturing Foundations Certificate	Job requirements include:	Job requirements include:	One-Year Technical Certification, Apprenticeship and/or Extensive Work Experience	Job requirements include:	On-the-job training / Associate Degree		Job requirements include:	Knowledge of math, physics, statistic, etc. • Product/ Process Design • Quality Control/ Assurance • Automated systems control • Management skills

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