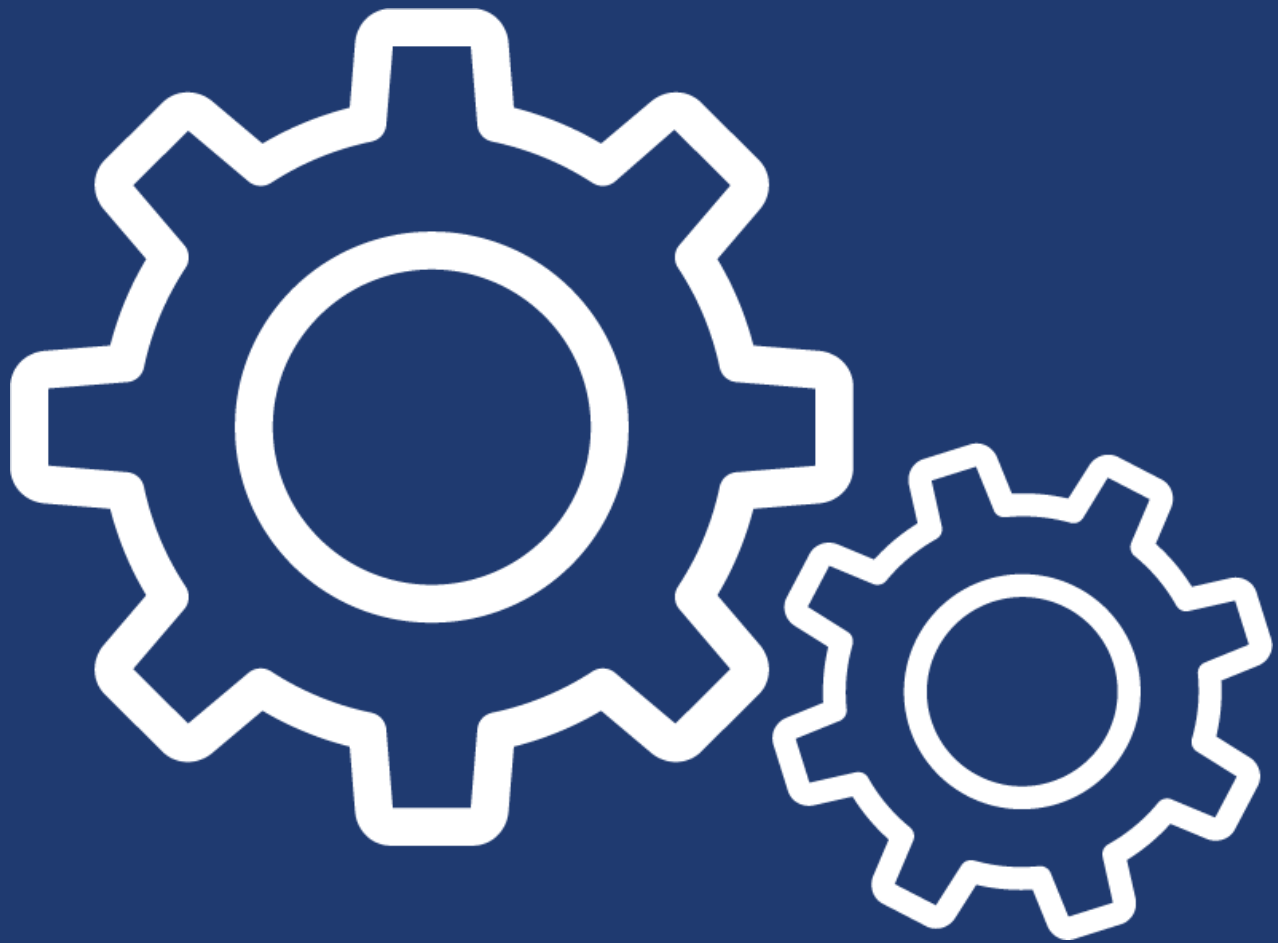


Manufacturing Production-2 Career Guide

A guide for machinists.



Finding Your Way to a Career: Manufacturing Production-2

Manufacturers rely on a wide range of occupations to deliver finished goods to their customers. Manufacturing production workers are an essential part of the team. From blueprints to finished product, they make certain that operational sequences run smoothly to deliver required quality standards safely, timely, and with minimal waste.

How to use this document to learn more.

As one of the Top 100 Hot Jobs for 2022, manufacturing production is a promising occupation for job seekers in West Michigan. To find out if this might be a good career choice for you, use this Career Map to examine:

- Who might enjoy this kind of work.
- Qualifications needed in this career field.
- Growth potential and levels of pay.
- Valuable skills for this type of work.
- Common tools and technology used in this work.
- Occupations, responsibilities, and other job titles.

This information is drawn from national data and insights from West Michigan employers. It is meant as a starting point for job seekers and career coaches to work together in the exploration of meaningful and fulfilling careers.



Exploring Occupations in Manufacturing Production-2

Manufacturing production workers are essential within every manufacturing environment. They utilize their knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture of goods. Typical activities may include reading blueprints, work orders, or production schedules to determine product or job instructions or specifications. They might also inspect, measure, or test completed metal workpieces to ensure conformance to specifications.

The Path to Success

Who might enjoy this type of work?

People who work in the manufacturing production field tend to enjoy:

- Practical, hands-on problem solving.
- Working with real world materials like wood, tools, and machinery.
- Following set procedures and routines.
- Working with data and details more than with ideas.
- Having a clear line of authority to follow.
- Mental problem solving.
- Working with ideas and using cognitive (thinking) skills.

People who do well in this work generally perform well in such areas as:

- Responsibility
- Adaptability
- Ingenuity
- Fine Manipulation
- Achievement

Qualifications needed in this career field.

Nationally, most people working in manufacturing production have a high school diploma or equivalent. The next largest group has an associate degree or certification.

Sample certifications include:

Computer Numerically Controlled Tool Programmers credential sample: High School degree, CNC Machinist Certification, on the job training.

Welders, Cutters, Solderers, and Brazers credential sample: High School Diploma, CNC Programmers certificate, associate's Degree, Apprenticeship.

Growth potential.

In the West Michigan counties of Allegan, Barry, Ionia, Kent, Montcalm, Muskegon and Ottawa, there were 5,154 manufacturing production jobs in 2020. That number is projected to grow by at least 2% to 5,166 by 2025.

Valuable skills for this type of work.

Tasks and functions performed by manufacturing production workers include:

- Controlling machines and processes.
- Getting information.
- Inspecting equipment, structures, or material.
- Monitor processes, materials, or surroundings.
- Identifying objects, actions, and events.

Common tools and technology used in this work.

Tools: mill machines, welding equipment, lathes, micrometers

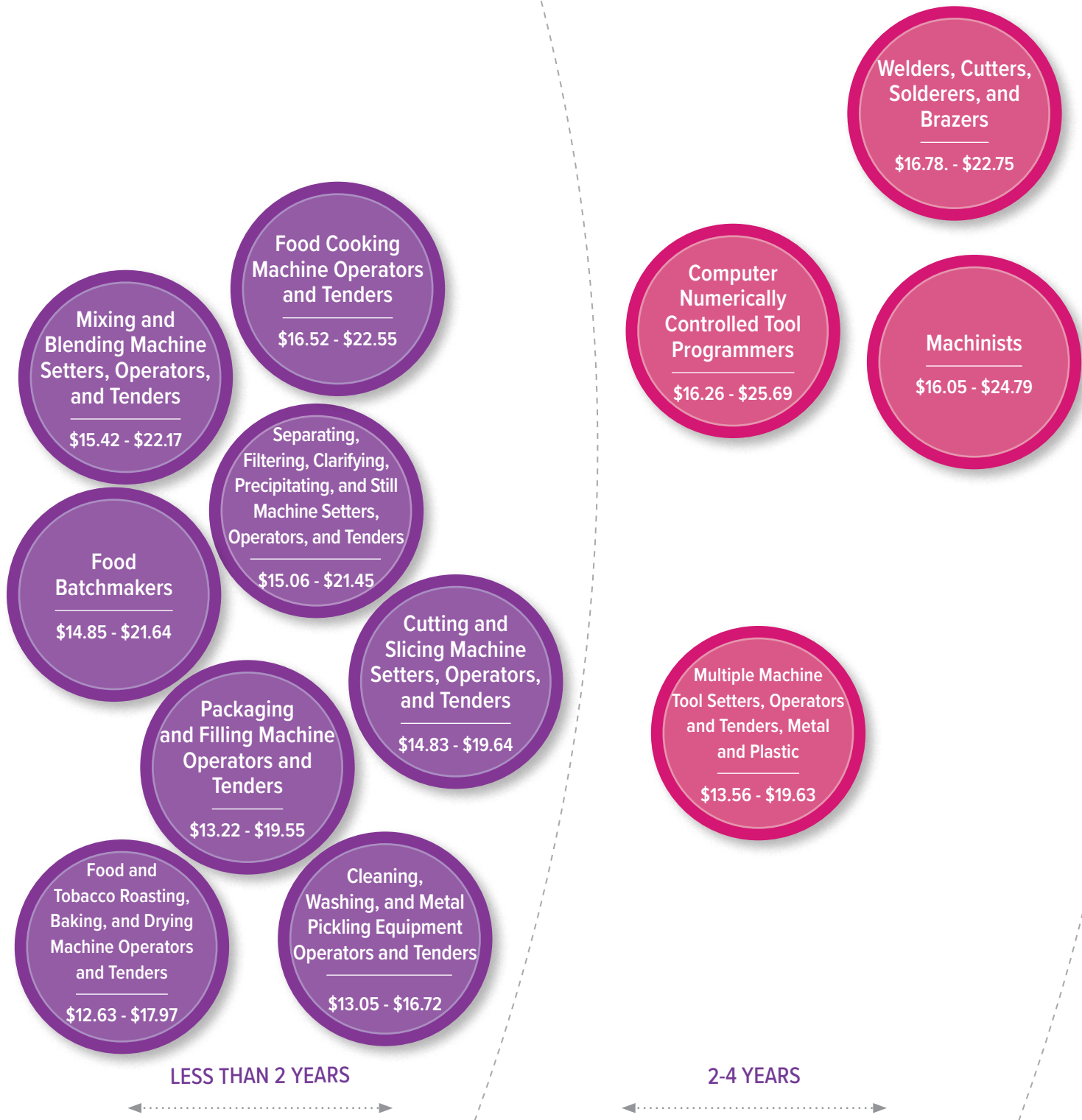
Technology: enterprise resource planning software, computer-aided manufacturing software, Microsoft Office

Mapping a Career:

Machinists

Welders, Cutters, Solderers, and Brazers

Computer Numerically Controlled Tool Operators



Wage ranges represent 25th - 75th percentile.
Timeframes represent the typical education and experience combined.
See page 6 for detailed description of occupations.

Manufacturing Production–2: A Field Guide

Occupations, responsibilities and other job titles.

Machinists

Set up and operate a variety of machine tools to produce precision parts and instruments out of metal. Includes precision instrument makers who fabricate, modify, or repair mechanical instruments. May also fabricate and modify parts to make or repair machine tools or maintain industrial machines, applying knowledge of mechanics, mathematics, metal properties, layout, and machining procedures.

Examples of locally used job titles: computer numeric controlled machinist (CNC machinist), gear machinist, machine repair person, machinist, maintenance machinist, manual lathe machinist, production machinist, tool room machinist

Welders, Cutters, Solderers, and Brazers

Use hand-welding, flame-cutting, hand-soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.

Examples of locally used job titles: aluminum welder, assembly line brazer, brazer, fabrication welder, fabricator, maintenance welder, solderer, sub arc operator, welder, wirer

Computer Numerically Controlled Tool Programmers

Develop programs to control machining or processing of materials by automatic machine tools, equipment, or systems. May also set up, operate, or maintain equipment.

Examples of locally used job titles: computer-aided design computer-aided manufacturing programmer (CAD CAM programmer), computer numerical control machinist (CNC machinist), computer numerical control programmer (CNC programmer), programmer



West Michigan Works! is part of the statewide Michigan Works! system and the workforce development agency in West Michigan. We serve the employers and job seekers of Allegan, Barry, Ionia, Kent, Montcalm, Muskegon and Ottawa counties.

We partner with employers, educators, economic developers and community organizations to create a qualified workforce that meets our region's current and future talent needs and fuels our shared economic future.

Learn more at: <https://www.westmiworks.org/>



CareerPoint helps students and job seekers find their place in the world of work by matching interests and abilities with training, support, and meaningful and rewarding careers.

By providing training and tools, CareerPoint supports the workforce professionals who help people navigate the West Michigan job market.

CareerPoint promotes evidence-based coaching to help students and job seekers discover and follow pathways to rewarding careers. This model follows seven steps to each participant's success.

Learn more at: <https://talnetcareerpoint.org/>