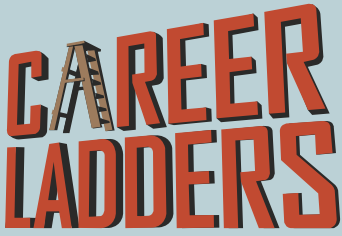


SKILLED TRADES

Skilled trades employees complete a registered apprenticeship program that is sanctioned by the United States Department of Labor, Bureau of Apprenticeship and Training, on-the-job training and related classroom instruction.



JOB TITLES COMMON TO THIS CAREER OCCUPATION INCLUDE:

| | | |
|--------------------|-------------------|-------------|
| Tool and Die Maker | Patternmaker | Millwright |
| Mold Maker | Electrician | Pipe Fitter |
| | Machine Repairman | |

SAGINAW VALLEY

Each ladder depicts a series of work experiences that leads to more challenging and higher paying opportunities. While every level of the ladder can provide a satisfying job, some employees will choose to gain even more skills and responsibilities that will advance them in their careers. To do so, they will need more education, training, and work experiences. Some jobs will require a certificate, a license, or an advanced degree.

CLIMBING THE CAREER LADDER

ADVANCED LEVEL

Bachelor's degree or proven technical skills that can be demonstrated through industry experience

Design Engineer

\$20.00-\$30.50/hour

Manager

\$19.00-\$32.00/hour

MID LEVEL

Associate's degree or equivalent training and experience

Design Specialist

\$15.00-\$23.50/hour

Skilled Trades

\$17.85-\$24.00/hour

Manufacturing Support Specialist

\$15.00-\$23.50/hour

ENTRY LEVEL

High school diploma and completion of the Engineering/Manufacturing and Industrial Technology Career Pathway requirements and/or appropriate career and technical education classes

CAD and Design Trainee

\$8.10-\$12.00/hour

Apprentice

\$8.00-\$15.00/hour

Machinist Trainee

\$8.10-\$12.00/hour

Wages will vary within this occupation based on the employee's education, training, and years of experience. The on-the-job training assistance given to trainees will also increase the wage and the employee's value to the company

JOB DESCRIPTION

Each occupation is described in terms of specific tasks and typical job duties.

A SKILLED TRADES PERSON MUST BE ABLE TO:

- Use a wide variety of trade practices and processes
- Read and understand blueprints and other job specifications
- Apply mathematics
- Develop innovative solutions to problems in a timely and cost-efficient manner
- Use precision measuring methods and equipment
- Carry a project through from start to completion
- Communicate with coworkers to give and receive instructions and coordinate activities
- Work alone or as part of a team

WAGES

Wage information was obtained from the Michigan Department of Labor and Economic Growth and from local employers to give a general idea of the wages and salaries for this occupation.

WAGE RANGE

\$17.85-\$24.00/hour

WORKING CONDITIONS

An average length of a workday for a person in this occupation is eight to 10 hours, beginning at 6:00 a.m. The work environment may be noisy and somewhat dirty, depending on the department.

EDUCATION AND TRAINING

Courses, programs, and certificates that are needed for employment are offered by local education and training providers.



HIGH SCHOOL

- Completion of high school's Engineering/Manufacturing and Industrial Technology Career Pathway and/or appropriate career and technical education classes
- Algebra
- Geometry
- Trigonometry
- Physics
- Career studies, such as electricity, engineering/computer-aided drafting, pre-engineering, machine tool technology, and welding
- Co-op work experience
- Saginaw/Midland/Bay Michigan Works! automation certificate

COMMUNITY COLLEGE

- Delta College: individual classes; four year apprentice training; associate's degree in applied science, skilled trades; bachelor of science transfer programs

UNIVERSITY

- Saginaw Valley State University: master of science, technological processes

LOCAL EDUCATION AND TRAINING PROVIDERS

- Local school districts
- Bay-Arenac ISD Career Center
- Saginaw Career Complex
- Saginaw/Midland/Bay Michigan Works!
- Delta College

JOB OUTLOOK

The rate of growth within this occupation is projected by data from local employers and the Michigan Department of Labor and Economic Growth.



ADVANCEMENT

Skilled trades employees are the most traditionally educated and trained employees. The Bureau of Apprenticeship and Training specifies the methods and content of the training, and, as a result, skilled trades employees can easily transfer from one workplace to another. Because of their training, they make good supervisors and managers.

WHAT THE EMPLOYER SAID



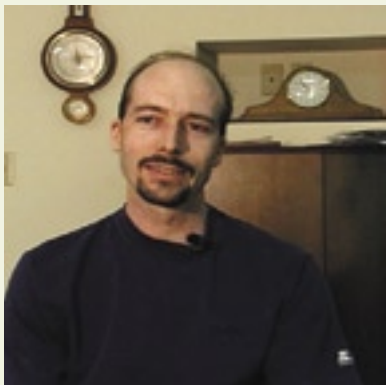
WHAT DO YOU LOOK FOR IN A POTENTIAL EMPLOYEE FOR THIS POSITION?

"When interviewing a potential employee for this position, I look for the following: experience in the specific position, a positive attitude and work ethic, strong math skills, the ability to communicate with fellow employees and supervisors, the willingness to learn and teach new techniques, the ability to read blueprints and set up machines and programs, and the ability to handle most hand tools and gauges."

Tom Shabluk, vice president of manufacturing and co-owner
Allied Tool and Machine

STAR PROFILE

This interview is intended to show you what is needed to be a star employee.



EMPLOYEE:
DOUGLAS MILLER

OCCUPATION:
CNC MACHINIST

COMPANY:
**ALLIED TOOL &
MACHINE COMPANY**

TELL US HOW YOU ATTAINED YOUR CURRENT POSITION.

When I graduated from high school, I wanted something to do where I worked with my hands. At that time, a local machine shop offered apprenticeships. If I worked with them for seven years they would reimburse me for my schooling. That seemed like a good deal so I signed up. I worked there and then came to Allied Tool. I was working as a Bridgeport operator when the company was expanding the computer numeric control (CNC) department, so I was given the opportunity to become a CNC mill operator.

DESCRIBE YOUR TYPICAL DAY.

An average workday is an eight- to 10-hour day starting at 6:00 a.m. that consists of programming and operating a CNC mill. Every day can be different with each new workpiece.

WHAT TRAINING AND EDUCATION DID YOU NEED TO ENTER THIS POSITION?

I had to learn how to program the mill, so I had to learn all of the codes for the control. The most valuable training was the actual hands-on running of the mill. I am an apprentice journeyman, so I learned the basics of my job through classes at Delta and working 8,000 hours with experienced operators.

WHAT QUALITIES MAKE SOMEONE A “STAR” IN THIS OCCUPATION?

A star employee is a person that shows up for work daily, on time, and can perform the job in an effective manner with a positive attitude.

WHAT DO YOU LIKE MOST/LEAST ABOUT YOUR JOB?

What I like the most about the job is the satisfaction of taking a block of material and turning it into a functional piece of tooling. It's crude when it starts but it's pretty neat when it's done.

What I like the least about the job is how easy it can be to make a simple mistake in reading a blueprint or programming the mill, because by making that kind of mistake it can be very costly to the company.

WHAT ADVICE CAN YOU GIVE SOMEONE SEEKING A JOB IN YOUR FIELD?

People seeking this type of work would have to like working with their hands, understand how to read blueprints, and have a good math background.

ARE THERE ANY LICENSES OR CERTIFICATIONS NEEDED FOR YOUR POSITION?

There are no certifications required, but if you want to receive a journeyman's card, you must go to college, study the trade, and work 8,000 hours in the shop. Some shops will train you and pay for your classes so that you can earn your journeyman's card (United States Department of Labor Bureau of Apprenticeship and Training).

ACKNOWLEDGMENTS

The Career Ladders project began as a Saginaw County Vision 2020 initiative. To date, more than 300 individuals have been involved in the project. It is impossible to list them all, but the Comprehensive Education and Workforce Development Committee appreciates each one and the incredible participation by our major employers and educational institutions, as well as the support from the Arnold and Gertrude Boutell Memorial Fund, The Dow Chemical Company, The Dow Corning Foundation, the Fordney Club, the Hospital Council of East Central Michigan, the Michigan Department of Labor and Economic Growth, the National Tooling and Machining Association – Saginaw Valley Chapter, the Saginaw Community Foundation, the Saginaw County Business and Education Partnership, the Saginaw County Chamber of Commerce Foundation, Saginaw County's local school districts, Saginaw County's Promise, the Saginaw County Vision 2020, the Saginaw Future Inc., the Saginaw/Midland/Bay Michigan Works!, the Saginaw Township Business Association, the Saginaw Valley Manufacturers' Association, and the Saginaw Valley Tech Prep Partnership. We also want to thank NOVA for their guidance.

EQUAL OPPORTUNITY EMPLOYER/PROGRAM. AUXILIARY AIDS AND SERVICES ARE AVAILABLE UPON REQUEST TO INDIVIDUALS WITH DISABILITIES.