

CAREER PATHS IN MANUFACTURING

4-YEAR OR MORE COLLEGE DEGREE AND/OR EQUIVALENT EXPERIENCE

Industrial Engineers \$38.38	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products \$28.40
Mechanical Engineers \$38.19	

1-2 YEAR COLLEGE DEGREE (OR CREDENTIAL)

Machinists \$23.62	Industrial Machinery Mechanics \$29.75	Industrial Engineering Technicians \$24.15
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HIGH SCHOOL DIPLOMA OR GED / ON-THE-JOB TRAINING

First-Line Supervisors/Managers of Production and Operating Workers \$30.32	Packaging and Filling Machine Operators and Tenders \$18.73	Welders, Cutters, Solderers, and Brazers \$23.55
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WHY CHOOSE A CAREER IN MANUFACTURING?

Manufacturing provides 13 percent of all total employment in the region, making it the second largest industry in the region, just under healthcare and social assistance. Average wages in manufacturing are more than \$10,000 higher than the overall regional average in the Northwest region.

Northwest PIC^{inc}



These jobs are in demand in Northwest Minnesota and these are Northwest Minnesota median wages. Data collected from Department of Employment and Economic Development.

CAREER PATHS IN MANUFACTURING

4-YEAR OR MORE COLLEGE DEGREE AND/OR EQUIVALENT EXPERIENCE

INDUSTRIAL ENGINEERS \$38.38 Design, develop, test, and evaluate integrated systems for managing industrial production processes, including human work factors, quality control, inventory control, logistics and material flow, cost analysis, and production coordination.

MECHANICAL ENGINEERS \$38.19 Perform engineering duties in planning and designing tools, engines, machines, and other mechanically functioning equipment. Oversee installation, operation, maintenance, and repair of equipment such as centralized heat, gas, water, and steam systems.

SALES REPRESENTATIVES, WHOLESALE AND MANUFACTURING, TECHNICAL AND SCIENTIFIC PRODUCTS \$28.40 Sell goods for wholesalers or manufacturers where technical or scientific knowledge is required in such areas as biology, engineering, chemistry, and electronics, normally obtained from at least 2 years of post-secondary education.

1-2-YEAR COLLEGE DEGREE (OR CREDENTIAL)

MACHINISTS \$23.62 Set up and operate a variety of machine tools to produce precision parts and instruments. 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.

INDUSTRIAL MACHINERY MECHANICS \$29.75 Repair, install, adjust, or maintain industrial production and processing machinery or refinery and pipeline distribution systems.

INDUSTRIAL ENGINEERING TECHNICIANS \$24.15 Apply engineering theory and principles to problems of industrial layout or manufacturing production, under direction of engineering staff. May perform time and motion studies on worker operations in a variety of industries for purposes such as establishing standard production rates or improving efficiency.

HIGH SCHOOL DIPLOMA OR GED / ON-THE-JOB TRAINING

FIRST-LINE SUPERVISORS/MANAGERS OF PRODUCTION AND OPERATING WORKERS \$30.32 Directly supervise and coordinate the activities of production and operating workers, such as inspectors, precision workers, machine setters and operators, assemblers, fabricators, and plant and system operators. Excludes team or work leaders.

PACKAGING AND FILLING MACHINE OPERATORS AND TENDERS \$18.73 Operate or tend machines to prepare industrial or consumer products for storage or shipment. Includes cannery workers who pack food products.

WELDERS, CUTTERS, SOLDERERS, AND BRAZERS \$23.55 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.