

# CAREER PATHS IN MANUFACTURING

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

Civil Engineer <b>\$47.87</b>	Mechanical Engineer <b>\$39.76</b>
Industrial Engineer <b>\$48.52</b>	

## 1-2 YEAR COLLEGE DEGREE (OR CREDENTIAL)

Electrical and Electronics Engineering Technician <b>\$30.89</b>	Industrial Engineering Technician <b>\$30.24</b>	Machinist <b>\$24.60</b>
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## HIGH SCHOOL DIPLOMA OR GED / ON-THE-JOB TRAINING

First-line Supervisor of Production and Operating Workers <b>\$31.29</b>	Food Batchmaker <b>\$18.47</b>	Welder, Cutter, Solderer, and Brazer <b>\$23.93</b>
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## WHY CHOOSE A CAREER IN MANUFACTURING?

The manufacturing industry is one of the largest and most influential sectors of the United States economy. Manufacturing provides just over 10% of total private sector jobs in the U.S., making it the third-largest industry in terms of employment. In Minnesota, Manufacturing accounts for 13% of private sector employment, ranking second. Wages in Manufacturing are 10% higher than the total of all industries.

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These jobs are in demand in Minnesota and these are 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

**CIVIL ENGINEER \$47.87** Performs engineering duties in planning, designing, and overseeing construction and maintenance of building structures, and facilities, such as roads, railroads, airports, bridges, harbors, channels, dams, irrigation projects, pipelines, power plants, and water and sewage systems.

**INDUSTRIAL ENGINEER \$48.52** 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 ENGINEER \$39.76** 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.

## 1-2-YEAR COLLEGE DEGREE (OR CREDENTIAL)

**ELECTRICAL AND ELECTRONICS ENGINEERING TECHNICIAN \$30.89** Apply electrical and electronic theory and related knowledge, usually under the direction of engineering staff, to design, build, repair, calibrate, and modify electrical components, circuitry, controls, and machinery for subsequent evaluation and use by engineering staff in making engineering design decisions.

**INDUSTRIAL ENGINEERING TECHNICIAN \$30.24** Apply engineering theory and principles to problems of industrial layout or manufacturing production, usually under the 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.

**MACHINIST \$24.60** 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.

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

**FIRST-LINE SUPERVISOR/MANAGER OF PRODUCTION AND OPERATING WORKERS \$31.29** 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.

**FOOD BATCHMAKER \$18.47** Set up and operate equipment that mixes or blends ingredients used in the manufacturing of food products. Includes candy makers and cheese makers.

**WELDER, CUTTER, SOLDERER, AND BRAZER \$23.93** 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.