



Pathways Wisconsin Advanced Manufacturing Technology Indianhead Region



CAREERS POSSIBLE

There are many exciting career options in Advanced Manufacturing Technology! Is this the pathway for you? Go to page two to learn how you can get started NOW!

ENTRY LEVEL POSITIONS

- Assembler
- Data Entry Clerk
- General Laborer
- Material Handler
- Packager

Credentials Needed

- Some positions require High School Diploma or GED
- Median Salary: \$26,180 - \$32,170

SEMI-SKILLED POSITIONS

- CNC Machine Operator ⚙️
- Chemical Equipment Operator
- Finishing Technician
- Food Processing Operator ⚙️
- Food Batchmaker ⚙️
- Machine Setter and Operator ⚙️
- Machine Builder
- Mold Technician
- Paint Technician ⚙️
- Quality Control Technician
- Sheet Metal Fabricator

Credentials Needed

- Completion of an Industry Recognized Certification or Technical Diploma
 - Some positions may also require field training or experience
- Median Salary: \$25,874 - \$50,792

JOURNEY WORKER and SKILLED or TECHNICAL POSITIONS

- Automation or Robotics Technician
- CNC Machinist ⚙️
- CNC Programmer ⚙️
- Chemical Technician ⚙️
- Electrical and Electronics Drafter ⚙️
- Electrical and Instrumentation Technician
- Electromechanical Technician
- Food Science Technician
- Industrial Electrician
- Industrial Engineering Technician
- Industrial Machinery Mechanic ⚙️
- Machinist ⚙️
- Maintenance Technician ⚙️
- Mechanical Drafter (CAD)
- Mechanical Engineering Technician
- Millwright
- Tool and Die Maker
- Welder

Credentials Needed

- Completion of Industrial Apprenticeship Program or Associate Degree
- Some positions may also require industry certifications, field training or experience

Median Salary: \$28,760 - \$55,190

MANAGEMENT POSITIONS

- Design & Engineering Manager
- Logistics Manager
- Maintenance Manager
- Manufacturing Manager
- Operations Manager
- Quality Manager
- Safety Manager
- Shipping Manager

Credentials Needed

- Completion of an Associate Degree or Bachelor Degree
- Some positions may also require industry certifications, field training or experience

Median Salary:
\$46,106 - \$94,020

PROFESSIONAL POSITIONS

- Automation Engineer ⚙️
- Electrical Engineer
- Electromechanical Engineering Technologist ⚙️
- Environmental Specialist ⚙️
- Food Scientist
- Industrial Data Scientist
- Industrial Engineer ⚙️
- Industrial Engineering Technologist ⚙️
- Material, Welding or Process Engineer ⚙️
- Mechanical Engineer
- Mechatronics Engineer ⚙️
- Network or Cybersecurity Specialist
- Quality or Reliability Engineer ⚙️

Credentials Needed

- Completion of Bachelor Degree
 - Some positions may require an additional Graduate Level Degree
- Median Salary: \$46,720 - \$101,470

Top Manufacturing Sectors in WI

- | | |
|-----------------------------------|--------------------------------|
| ● Computer and electronic product | ● Paper |
| ● Electrical equipment | ● Plastics and rubber products |
| ● Fabricated metal products | ● Printing |
| ● Food and Beverage | ● Transportation equipment |
| ● Machinery | ● Wood products |

Quarterly Census of Employment and Wages - Bureau of Labor Statistics, Annual 2016 employment





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HIGH SCHOOL OPTIONS

High schools offering a Regional Career Pathway need to include one option from each of the four elements. Students can get a head start in high school by completing 3 of the 4 pathway elements in a Regional Career Pathway.

ELEMENT 1: Sequence of Courses

- Must offer three courses
- Course should include the [Education Building Blocks](#) for this pathway:

School Districts Offering This Pathway: TBD

- TBD

ELEMENT 2: State Certified Work-Based Learning Program (at least one)

- [Employability Skills](#) (90 hrs)
- State Skill Standards Co-Op (480 hrs/1 year)
- Youth Apprenticeship (450-900 hrs/1-2 years)
- **Manufacturing**
 - Production
 - Production Operations Management
 - Maintenance, Installation and Repair

Manufacturing Related Career Awareness and Exploration Experiences

State

- [First Robotics](#)
- [Wisconsin SkillsUSA](#)
- [Hour of Code](#)
- [Wisconsin Manufacturing Month \(October\)](#)

Regional

- [Fab Labs](#)
- [WITC Welding Competitions](#)
- [WITC Career Days & Open House](#)
- [Gold Collar Careers - Manufacturing Works](#)
- [Inspire Northward\(North\)](#)
- [Inspire Connections\(South\)](#)

ELEMENT 3: College Credit Opportunities (at least one)

Wisconsin Indianhead Technical College

- [Industrial Safety](#)
- [Basic Machine Shop](#)
- [Machine Shop Theory 1](#)
- [Materials for Machine Tooling Techniques](#)
- [Print Reading](#)
- [Print Reading for Machine Trades 1](#)
- [CAD Basics](#)
- [Introduction to CAD/CAM](#)
- [DC Electricity](#)
- [Print Reading for Welding Trades](#)
- [Flux Cored Arc Welding 1](#)
- [Gas Metal Arc Welding 1](#)
- [Gas Tungsten Arc Welding 1](#)
- [Oxyfuel and Arc Cutting Processes](#)
- [Shielded Metal Arc Welding 1](#)
- [Welding for Mechanics](#)

UW-EC/Barron County

- [English Writ 101 & 102](#)
- [Interpersonal Communication 201](#)
- [Intro to Speech 202](#)

Advanced Placement (AP) 3 or Better

- AP- Calculus ([UWEC](#))([UW-Stout](#))([WITC](#))
- AP- English Comp([WITC](#))
- AP- Intro to Psychology([WITC](#))

ELEMENT 4: Industry

Recognized Certifications (at least one)

[American Welding Society \(AWS\)](#) *

- Level 1: Entry Welder

[Certified Solidworks Associate](#)

[Lean Six Sigma \(ASQ\)](#)

[Manufacturing Skills Standards Council \(MSSC\)](#) *

- Certified Production Technician (CPT) full program or any of the modules

[NC3 Industry 4.0 and Mechatronics](#)

[OSHA 10 -General Industry Version](#)

[National Institute for Metalworking Skills \(NIMS\)](#)

- Industrial Technology Maintenance Level 1 (any)
- Machining Level I (any) *
- Metalforming Level I *

[Smart Automation Certification Alliance \(SACA\)](#)

- Associate level (any)

[Snap On](#) *

- [Precision Measurement Instruments Certification](#)
- [Multimeter](#)
- [Mechanical and Electronic Torque Certification](#)

[The Association for Packaging and Processing Technologies \(PMMI\) Mechatronics Certification](#)

*Approved for CTE Incentive Grants



State-Endorsed

NEW V1: AUG2019



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POSTSECONDARY OPTIONS

You have many options after high school if you want to pursue this Regional Career Pathway!

ENTRY LEVEL WORK

Many entry level positions are available in this industry with great opportunities for advancement and on the job training.

TECHNICAL COLLEGE: SEMI-SKILLED POSITIONS

Regional Postsecondary Options

Technical Diploma

Wisconsin Indianhead Technical College(WITC)

- [Mechatronics Basics](#)(< 1 year)
- [Automated Packaging Systems Technician](#)*(2 year)
- [Industrial Maintenance Technician](#) (2 years)
- [Manufacturing Production Technician](#) (1 semester)
- [Machine Tool Operation-CNC](#)(1 year)
- [Entry Level Machining](#)(1 year)
- [Machine Tooling Technics](#)(2 years)
- [Machine Tool Operation](#)(1 year)
- [Machine Tool Technician](#)(2 years)
- [Shielded Metal Arc Welding](#)(< 1 year)
- [Gas Metal Arc Welding](#)(< 1 year)
- [Welding](#) (1 year)

*Articulation Agreements/Transfer Opportunities

[UW-Oshkosh](#)(Automation)
[Northland College](#)(Business)
[UW-Superior](#)(Business)
[UW-River Falls](#)(Business)
[UW-Stout](#)(Business)

REGISTERED APPRENTICESHIPS

To become a Journey Worker, you must complete a Registered Apprenticeship (RA) Program. You can find the RA programs offered in WI that would prepare you for this pathway here:

https://dwd.wisconsin.gov/apprenticeship/industrial_trades.htm#industry

Wisconsin Indianhead Technical College(WITC)

- [Maintenance Mechanic/Millwright Apprentices](#)
- [Injection Mold Set-up\(Plastic\)](#)

TECHNICAL COLLEGE: SKILLED/TECHNICAL POSITIONS

Regional Postsecondary Options

Associate Degrees(2 years)

Wisconsin Indianhead Technical College(WITC)

- [Automation for Industrial Systems](#)*
- [Technical Studies - Journeyworker](#)

Some positions may also require industry certifications, field training or experience.

TECHNICAL COLLEGE OR UNIVERSITY: MANAGEMENT POSITIONS

Regional Postsecondary Options

Wisconsin Indianhead Technical College(WITC)

- [Business Management](#)*

Northland College

- [Business Management](#)

UW- Superior

- [Management](#)
- [Transportation and Logistics Management](#)
- [Supply Chain Management](#)
- [Pre-Engineering\(2 year\)](#)

UW- Eau Claire

- [Management - Operations and Supply Chain Management](#)
- [Management](#)

UW- Stout

- [Management](#)

Some positions may also require industry certifications, field training or experience.

UNIVERSITY: PROFESSIONAL POSITIONS

Regional Postsecondary Options

UW- Eau Claire

- [Material Science & Engineering](#)
- [Pre-Engineering](#)

UW- Stout

- [Manufacturing Engineering](#)
- [Computer and Electrical Engineering](#)
- [Engineering Technology](#)
- [Industrial Design](#)
- [Manufacturing Engineering](#)
- [Mechanical Engineering](#)
- [Plastics Engineering](#)
- [Operations and Supply Management](#)

Some positions may require an additional Graduate Level Degree.

MILITARY

Communications Equipment Repairers
Computer Repairers
Specialists
Electrical Instrument/Equipment Repairers
Machinists
Non-Destructive Testers

Power Plant Electricians
Power Plant Operators

Powerhouse Mechanics
Precision Instrument/Equipment Repairers
Preventive Maintenance Analysis

Radar and Sonar System Repairers
Survival Equipment

Tactical Data System Repairers
Weapons Maintenance Technicians
Welders and Metal Workers



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