## WHY JOIN A PATHWAY?

- For high school students, regional career pathways align education and training with the needs of the local job market, provide a range of postsecondary options, result in a high school diploma with at least one industry-recognized credential, and help students enter or advance within an occupation.
- For schools, career pathways provide a specific ACP plan for occupations that are in demand in Wisconsin. This allows schools to focus on student and curriculum activities with input and support from regional employers and higher education.
- For employers, regional career pathways make partnerships with a greater number of schools possible. This allows employers to shape the future talent pipeline, foster young talent, and highlight local career opportunities across an entire region.

Pathways WISCONSIN

CESA 12

## OUR MISSION

The regional collaboratives adopt, implement, promote, and monitor high school career pathways in high-skill, in-demand industry sectors. They act as an advisory group, on behalf of regional districts, to identify and overcome barriers that prevent students in the region from accessing the pathway. An example of such a barrier may include college curriculum that is not aligned with the career pathway. In addition, the collaborative provides the means necessary for students to participate and complete a pathway by:

- Taking a sequence of aligned courses,
- Earning an industry-recognized credential,
- Enrolling in dual college credit classes,
- Participating in career-based and work-based learning experiences, and
- Accessing related Career and Technical Education (CTE) student organizations

## CONTACT

CESA 12
715-682-2363
www.cesa12.org

LET'S EXPLORE...

# Architecture and Construction

A REGIONAL CAREER PATHWAY DEVELOPED BY THE GREAT NORTHWEST COLLABORATIVE AND APPROVED BY THE DEPARTMENT OF PUBLIC INSTRUCTION

# WHAT IS ARCHITECTURE AND CONSTRUCTION?

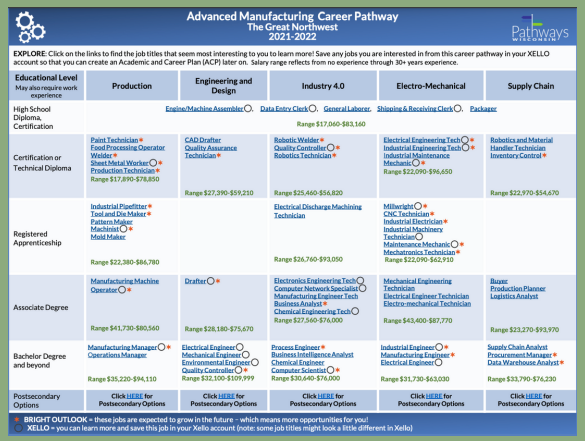
The construction sector is made up of companies and businesses engaged in the construction of buildings or engineering projects. Jobs in the construction field will be among the fastest growing between 2020 and 2030, according to recent projections. "As demand for labor grows, it's crucial that craftspeople are receiving specialized training. Training skilled craftspeople requires programs that combine classroom training and on-the-job experience, and are most successful when led or supported by companies invested in training their workforce"

## WHY ARCHITECTURE AND CONSTRUCTION IN HIGH SCHOOL...

- According to Workforce Development data from 2021, Construction is among the (3rd) top growing occupations in northern Wisconsin.
- Architecture and Engineering is also the second leading hourly earnings at just over $30 an hour. Construction is $23/hour.

**Top 10 WI Occupations with Most Projected Job Openings (2018-2028)**

| Projected Annual Total Job Openings | Occupation | Salary Range | Education Needed |
|---|---|---|---|
| 3026 | Landscaping and Groundskeeping Workers | $21,475-$36,965 | No formal educational credential |
| **2557** | Carpenters | $32,361-$59,952 | High school diploma or equivalent |
| **2402** | Construction Laborers | $29,283-$51,213 | No formal educational credential |
| **1580** | Electricians | $39,870-$70,263 | High school diploma or equivalent |
| **1219** | First-Line Supervisors of Construction Trades and Extraction Workers | $49,845-$81,585 | High school diploma or equivalent |
| 1106 | Operating Engineers and Other Construction Equipment Operators | $41,671-$72,967 | High school diploma or equivalent |
| **1104** | Plumbers, Pipefitters, and Steamfitters | $44,036-$80,742 | High school diploma or equivalent |
| 642 | Heating, Air Conditioning, and Refrigeration Mechanics and Installers | $35,228-$60,423 | Postsecondary non-degree award |
| 634 | Highway Maintenance Workers | $31,046-$49,139 | High school diploma or equivalent |
| **572** | Civil Engineers | $53,939-$91,017 | Bachelor's degree |



**Advanced Manufacturing Career Pathway**
**The Great Northwest**
**2021-2022**

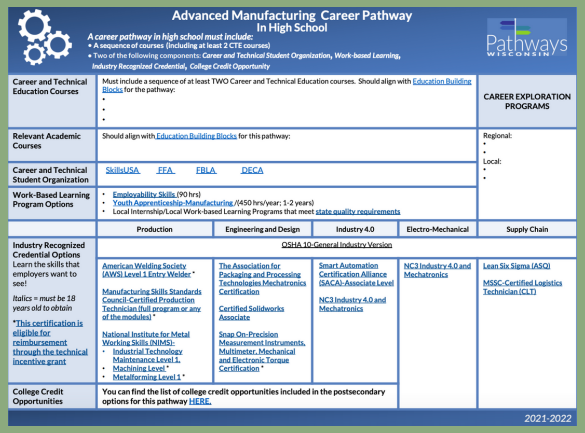
Pathways Wisconsin

**EXPLORE**: Click on the links to find the job titles that seem most interesting to you to learn more! Save any jobs you are interested in from this career pathway in your XELLO account so that you can create an Academic and Career Plan (ACP) later on. Salary range reflects from no experience through 30+ years experience.

| Educational Level (May also require work experience) | Production | Engineering and Design | Industry 4.0 | Electro-Mechanical | Supply Chain |
|---|---|---|---|---|---|
| High School Diploma, Certification | Engine/Machine Assembler ○, Data Entry Clerk ○, General Laborer, Shipping & Receiving Clerk ○, Packager<br>Range $17,060-$83,160 | | | | |
| Certification or Technical Diploma | Paint Technician *<br>Food Processing Operator<br>Welder *<br>Sheet Metal Worker ○ *<br>Production Technician *<br>Range $17,890-$78,850 | CAD Drafter<br>Quality Assurance Technician *<br>Range $27,390-$59,210 | Robotic Welder *<br>Quality Controller ○ *<br>Robotics Technician *<br>Range $25,460-$56,820 | Electrical Engineering Tech ○ *<br>Industrial Engineering Tech ○ *<br>Industrial Maintenance Mechanic ○ *<br>Range $22,090-$96,650 | Robotics and Material Handler Technician<br>Inventory Control *<br>Range $22,970-$54,670 |
| Registered Apprenticeship | Industrial Pipefitter *<br>Tool and Die Maker *<br>Pattern Maker<br>Machinist ○ *<br>Mold Maker<br>Range $22,380-$86,780 | | Electrical Discharge Machining Technician<br>Range $26,760-$93,050 | Millwright ○ *<br>CNC Technician *<br>Industrial Electrician *<br>Industrial Machinery Technician ○<br>Maintenance Mechanic ○ *<br>Mechatronics Technician *<br>Range $22,090-$62,910 | |
| Associate Degree | Manufacturing Machine Operator ○ *<br>Range $41,730-$80,560 | Drafter ○ *<br>Range $28,180-$75,670 | Electronics Engineering Tech ○<br>Computer Network Specialist ○<br>Manufacturing Engineer Tech<br>Business Analyst *<br>Chemical Engineering Tech ○<br>Range $27,560-$76,000 | Mechanical Engineering Technician<br>Electrical Engineer Technician<br>Electro-mechanical Technician<br>Range $43,400-$87,770 | Buyer<br>Production Planner<br>Logistics Analyst<br>Range $23,270-$93,970 |
| Bachelor Degree and beyond | Manufacturing Manager ○ *<br>Operations Manager<br>Range $35,220-$94,110 | Electrical Engineer ○<br>Mechanical Engineer ○<br>Environmental Engineer ○<br>Quality Controller ○ *<br>Range $32,100-$109,999 | Process Engineer *<br>Business Intelligence Analyst<br>Chemical Engineer<br>Computer Scientist ○ *<br>Range $30,640-$76,000 | Industrial Engineer ○ *<br>Manufacturing Engineer *<br>Electrical Engineer ○<br>Range $31,730-$63,030 | Supply Chain Analyst<br>Procurement Manager *<br>Data Warehouse Analyst *<br>Range $33,790-$76,230 |
| Postsecondary Options | Click HERE for Postsecondary Options | Click HERE for Postsecondary Options | Click HERE for Postsecondary Options | Click HERE for Postsecondary Options | Click HERE for Postsecondary Options |

* BRIGHT OUTLOOK = these jobs are expected to grow in the future – which means more opportunities for you!
○ XELLO = you can learn more and save this job in your Xello account (note: some job titles might look a little different in Xello)

The image above shows the first page of a pathway map. It explains different career paths within manufacturing, level of education needed, salary range, high demand jobs, and each is linked to more career information.



**Advanced Manufacturing Career Pathway**
**In High School**

Pathways Wisconsin

*A career pathway in high school must include:*
- A sequence of courses (including at least 2 CTE courses)
- Two of the following components: *Career and Technical Student Organization, Work-based Learning, Industry Recognized Credential, College Credit Opportunity*

| | | |
|---|---|---|
| Career and Technical Education Courses | Must include a sequence of at least TWO Career and Technical Education courses. Should align with Education Building Blocks for the pathway:<br>•<br>•<br>• | CAREER EXPLORATION PROGRAMS |
| Relevant Academic Courses | Should align with Education Building Blocks for this pathway: | Regional:<br>•<br>•<br>Local:<br>•<br>• |
| Career and Technical Student Organization | SkillsUSA FFA FBLA DECA | |
| Work-Based Learning Program Options | • Employability Skills (90 hrs)<br>• Youth Apprenticeship-Manufacturing (450 hrs/year; 1-2 years)<br>• Local Internship/Local Work-based Learning Programs that meet state quality requirements | |

| | Production | Engineering and Design | Industry 4.0 | Electro-Mechanical | Supply Chain |
|---|---|---|---|---|---|
| Industry Recognized Credential Options<br>Learn the skills that employers want to see!<br>*Italics = must be 18 years old to obtain*<br>*This certification is eligible for reimbursement through the technical incentive grant | OSHA 10 General Industry Version<br>American Welding Society (AWS) Level 1 Entry Welder *<br>Manufacturing Skills Standards Council-Certified Production Technician (full program or any of the modules) *<br>National Institute for Metal Working Skills (NIMS):<br>• Industrial Technology Maintenance Level 1<br>• Machining Level *<br>• Metalforming Level 1 * | The Association for Packaging and Processing Technologies Mechatronics Certification<br>Certified Solidworks Associate<br>Snap On-Precision Measurement Instruments, Multimeter, Mechanical and Electronic Torque Certification * | Smart Automation Certification Alliance (SACA)-Associate Level<br>NC3 Industry 4.0 and Mechatronics | NC3 Industry 4.0 and Mechatronics | Lean Six Sigma (ASQ)<br>MSSC-Certified Logistics Technician (CLT) |
| College Credit Opportunities | You can find the list of college credit opportunities included in the postsecondary options for this pathway HERE. | | | | |

2021-2022

The image above shows the second page of a pathway map. It shows what courses are available in your school district. It also shows internships, work-based learning opportunities and industry-recognized credentials that are available.