



Don't just talk about manufacturing...

**LIVE IT!**



# EXPERIENCE MANUFACTURING

**A hands-on approach to career exploration**

**The Production and Manufacturing Institute**

*A collaborative workforce partnership driven by business, partnered with education, and supported by the community.*

*"I had a positive experience at PMI. What made it positive was the amount of growth and perspective I gained through trying things that were all new to me."*

*-Robert*



# Welcome to the Institute!

## Welcome to the Institute!

Students want opportunities to explore careers. Unfortunately, they don't have the same opportunities many of us had to take shop class, use tools, work on cars, or do other activities that might lead them to their "calling." We know that giving kids the right opportunity is all it takes to help them succeed.

The Manufacturing Institute was created in 2019 to introduce High School students to careers in Manufacturing and the Trades. Starting with one group of 20 students, the Institute has grown to more locations each year.

We provide a hands-on, immersive experience to learn what it's like to work within a real production environment. Participants are part of a team that designs, makes, and sells products to real customers. They learn how a manufacturing company operates, what it takes to be successful in their careers, the value of teamwork and leadership, and much more!

Each year we take lessons learned from the previous Institute and make improvements.

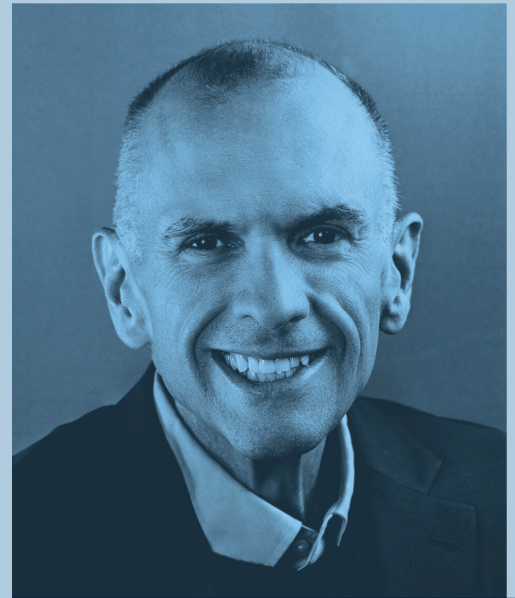
In 2022, we expanded the institute to a second site at Newport High School. We learned how to create simultaneous remote locations - just as a company has remote worksites.

Our successful partnership allowed us to expand in 2023 to four locations. The program integrated and coordinated multiple sites, projects, and student interests. For the coming year, we are adopting a franchise model to serve more students in more places.

While the Institute is driven by business, it takes a strong partnership with our schools and community agencies to make this work. The workforce challenge is bigger than any one of us. It will take all of us to tackle. The Institute is an example of one collaborative effort that works.

We appreciate your support and welcome your comments. Please reach out to us at any time.

[www.ManufacturingInstitute.net](http://www.ManufacturingInstitute.net)



**Dr. Wade Larson, PMI Founder**

# THANK YOU

We extend our appreciation to our sponsors, education partners, and supporters who help make the Institute happen each year. This collaboration is reflective of what it takes to address the workforce challenges of today and into the future.

Thank you for recognizing the value and potential for this model to help students explore and prepare for careers in manufacturing and the trades.

***Together we can make a difference!***



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# MISSION

## The threefold

### Mission of the Manufacturing Institute

- Expose youth to careers in the trades.
- Simulate real work experiences to help students explore career opportunities.
- Help youth prepare for the workforce.

# VALUES

## Hard Work

Participants work hard, play hard, and GSD ("get stuff done"). We count on each person to do their part.

## Presence

The most successful people arrive early, work their entire shift, and focus on doing a good job throughout the day.

## Teachability

Feedback is a gift. Use feedback to learn how to improve each day and continuously implement changes.

## Resilience

Work is hard. The world is hard. Our program simulates real work, real problems, and real life. Students must be resilient and "stick with it" when things get tough.

## Adaptability

The "unexpected" is expected in manufacturing. Things happen and you must be ready to pivot and figure it out.

## Teamwork

Teams are essential to success. You are expected to get along with others and be a contributing part of the team.

## Inquiry

You can find the solution to almost any problem. The greatest challenge is framing and asking the right question.

## Respect

Treat others BETTER than you expect to be treated. It's the "Platinum Rule." Anything less will not be tolerated.

## Personal Leadership

Life Isn't Fair - It's what you make it. We all start in different places, but you decide where and how far you go.

## Profitability

A business that doesn't make a profit is called a hobby. Profits allow companies to do more. We will be profitable.

## Quality

How we do anything is how we do everything. What we say, do, and make reflects who we are.

## Commitment

If you're part of the program, you commit to our values. If not, you're encouraged to consider a better-suited program.

## Attitude

We want you to want to work and love what you do. Attitude largely defines your experience, relations, performance, and outcomes.





# WHAT IS THE INSTITUTE?

The Manufacturing Institute is a practical model that introduces students to careers in the trades. Our partnership of business, education, and community create a unique opportunity for students to experience the trades in an “earn as you learn” environment. Graduates earn high school CTE credit and a stipend for their successful completion. They gain skills for the workplace and improve their readiness no matter their career interest.



Institute participants design, manufacture, and sell real products to real customers. They experience a real work experience in a manufacturing environment.



Students receive instruction and mentoring from industry professionals. We expose them to several careers, functions, and possibilities in the trades.





# Quality

**How we do anything is how we do everything. What we say, do, and make reflects who we are.**

*"It was a positive experience seeing the project go from blueprints to a real object."*

*-Sawyer*



# WHAT DO WE DO?

## It's Not School or Summer Camp

The Institute is a 3-week simulation of a real production and manufacturing environment. Participants work in teams assigned a specific product they help design, manufacture, and sell to real customers. They collaborate with other teams to manage resources, align team goals with company objectives, and deliver quality products. We teach principles of production, operations, and skills needed for their products. Our goal is to provide an immersive opportunity for high school students to experience manufacturing, recognize career opportunities, and guide them to the best pathway to get there.

## Real Products

Teams design and manufacture real products. They help establish price and figure out how to sell the products throughout the course of the Institute program. Principles of manufacturability, lean, efficiency, and quality are at the core of our practices to ensure the best products possible. No matter their career of choice, our graduates increase their workforce readiness as they understand the scope of business.

## Real Workplace

We provide the real deal when it comes to the work environment. Teams have assigned production quotas, deadlines, and bosses who are there to guide, encourage, and give direct feedback. Students are expected to work hard, play hard, and pitch in to achieve the overall goals - just like real work.

A photograph showing three students in a workshop setting. They are wearing green lab coats and safety glasses. One student in the foreground is wearing brown leather gloves and is working on a metal surface. Two other students are standing behind him, observing his work. The background shows a typical workshop environment with a sink, paper towels, and various tools.

The Institute exposes students to career opportunities in manufacturing and the trades. We offer the chance to explore opportunities and prepare for careers in several fields.



## Real Customers

Students are expected to sell the products they make. We do not have pre-set buyers. Just like in real business, everyone in the company is responsible to help make things work. This includes identifying, connecting with, and selling to customers.

## Real Money

We sell products for money. A business that doesn't make a profit is called a hobby - and they go broke fast. The Institute helps participants understand the need to maintain quality, cost controls, and the impact to profits. As profits go up, they see the positive outcomes that come with it. (All proceeds go back into the overall costs of the program.)

## Real Manufacturing

Teams start with quotas to fill and deadlines to meet. Along the way, things happen...just like real manufacturing. Supply chain issues, customer change orders, shifts to quantities, and other challenges are common that require students to pivot. Students can't wait for the next "Change Memo" to come out each morning to see what's next.

## Real Learning

Students get to see what manufacturing is like as they tour companies during the Institute. They visit several sponsors to see how production takes place in different environments. While we all "make things" in manufacturing, there are differences in how we do it. We want to expose students to different employers, careers, and pathways to success.

## Real Growth

Participants face challenges each day during the Institute they must overcome. As they learn to work together as a team, they improve problem-solving, critical thinking, communication, collaboration, and leadership. They handle new problems, learn to take feedback and make improvements, and understand the impact they have on the overall goals. These qualities carry through no matter their career.





# BENEFITS FOR STUDENTS

Just like anything in life, students get out of the Institute what they put into it. We do our best to prepare and deliver a high quality program that helps students from diverse pathways, interests, and backgrounds explore careers in the trades. Our goal is to increase exposure, hands-on exploration, and career preparation to as many students as possible. Some of the specific benefits include:

## Paid Experience

Students earn while they learn. A generous stipend is provided at the completion of the program to reward graduates for a job well-done. While we offer a lot to students in the form of learning, experience, skills, networking, and more, we also recognize their hard work and contribution to help the Institute remain a viable program.

## CTE Credit

Students are often challenged with earning sufficient CTE credits that allow them the flexibility to pursue additional courses that may be career related. The Institute offers CTE credit through dual credit recognition for students who choose to use the experience toward graduation requirements.

## College Credit

The Institute works within the Community College program to articulate credit for its program. Students may be required to complete additional paperwork or assignments for full completion, but are able to earn college credits while in high school. This can be a great head-start to their career launch.

## Entrepreneurship

As participants learn more about manufacturing as a business, they come to recognize how money is made. Understanding business plans, translating ideas into design, manufacturing product, identifying customers, and reaching them through marketing to ultimately make the sale is critical to any company. Students learn the elements of launching and running a successful business.

## Workplace Competency

All graduates leave with a sense of increased knowledge, skills, abilities, and attitudes that will help them succeed in the workplace. Regardless whether they pursue a career in manufacturing or another pathway, students gain critical skillsets that will help them succeed. These can help to improve employability, accelerate promotability, and help to achieve goals and profits faster.

## Personal Leadership

Students are given the opportunity to experience learning in new areas. They don't just talk about it...they do it. This helps them to:

- **Gain Confidence** as they demonstrate new skills.
- **Improve Performance** as they apply what they learn.
- **Help Others** as they recognize the value of **Teamwork**.
- Set and **Achieve Goals**
- **Adopt Workplace Values** that employers need.

The more students engage in the program, the greater the benefit for years to come.







# Teamwork

Teams are essential to success. You are expected to get along with others and be a contributing part of the team.

*"My most favorite part was working with other people and seeing their different perspectives."*

*-Kas*



# BENEFITS FOR SCHOOLS

Schools that “get it” recognize that different students need different pathways. Manufacturing careers include a very broad range of jobs, including engineers, designers, welders, machinists, assemblers, mechanics, and so much more. Other trades such as Construction and Automotive share many of the same skillsets and can benefit from programs that expose students to career opportunities.

## Promoting CTE

School programs are a great way to attract students who are interested in career tracks and programs. A program outside the normal schedule allows them to explore career options without taking away other opportunities due to strict high school credit requirements. As students get to know the world of manufacturing and related careers, they often seek related courses the following semester.

## Increased Interest in Pathways

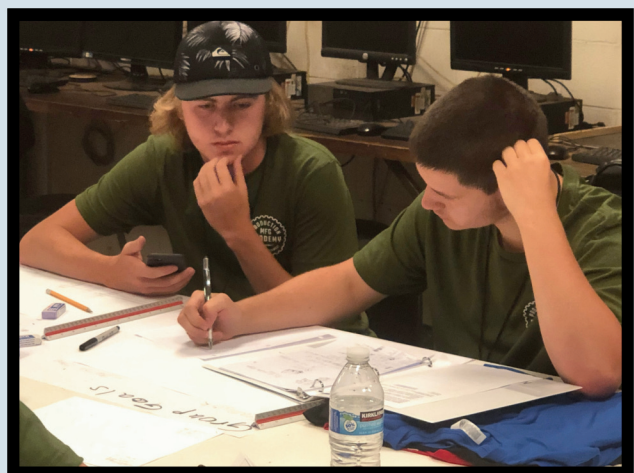
An immersive program like the Institute generates excitement among students. As they recognize the many ways to pursue career preparation, momentum increases and spreads to their friends. Schools can build on this momentum by promoting multiple pathways beyond 4-year programs that help students become workforce ready after they graduate.

## Improved Career Focus

Our graduates leave the experienced excited to take the next step that will lead them to their career. They will ask better and more focused career questions to help them align schedules, take different classes, begin work-site learning experiences, and other steps that improve or accelerate readiness.

## Engagement

Students engage more fully when they have a purpose. We put students into situations that require full engagement that results in collaborative and exciting outcomes. The skills they learn in leading others, working in teams, communicating, setting and achieving goals, and fully engaging in a project carry on.





A student wearing a dark baseball cap and a grey t-shirt is focused on operating a sewing machine in a workshop. The student is leaning over the machine, which is mounted on a wooden table. The background shows other students working at similar workstations, creating a busy, industrial learning environment. The entire image has a blue-tinted overlay.

# Resilience

**Work is hard. The world is hard. Our program simulates real work, real problems, and real life. Students must be resilient and "stick with it" when things get tough.**

*"The biggest challenge for us was our materials coming in late and figuring out how to work without them. We were able to work as soon as we got them and make it look good too."*

*-Gabriel*



# BENEFITS FOR BUSINESS

Our primary investors in the program are businesses - area manufacturers that recognize the value of preparing our youth for the workforce. It's impossible to measure the exact ROI that businesses get for their contributions, but they recognize the impact to increase student interest in the trades. We know this has major benefits to individual students and we have begun to see our graduates enter the local workforce. The efforts are paying off and will continue to grow in impact.

## Future Workforce Development

Business recognizes the need to step in and assist with developing tomorrow's workforce. Today's shortages demand a solution to improve workforce readiness of high school graduates. In manufacturing, employers are also focused on increasing awareness of and interest in careers in the trades. Our business sponsors have reported outcomes in Institute graduates of accelerated skills development, faster integration of students into the workplace, and higher performance.

## Exposure to Employers

Employers can introduce themselves to Institute participants through sponsorship and exposure to the workplace. Weekly tours to area manufacturers, visiting presenters from sponsors, and ongoing mentorship are examples of how employers build and maintain a relationship with Institute students. There is no shortage of examples of how employers can engage with students during the program.

## Community Support

Business supporters receive favorable recognition from the community as they support the growth of future employees. Community strength relies on families who can support themselves and actively contribute to the good of others. As businesses sponsor, support, and work with the Institute, they are helping to develop future workers who will contribute to the good of the local community.

## School Engagement

Businesses often wonder how they can connect with schools to begin interacting with students. The Institute creates a conduit for employers to work directly with school districts, administrators, and teachers. The program influences curriculum and outcomes. At the same time, increased engagement allows businesses to guide programs and influence student outcomes.







# Teachability

**Feedback is a gift. Use feedback to learn how to improve each day and continuously implement changes.**

*"A positive experience was building the first bench. Everything went wrong! But our team learned from it, and we improved the bench as well as our teamwork."*

*-Hayden*



# WHY WE PARTNER

The Institute evolved from a partnership between business, education, and the community. Solving the workforce challenge will take all of us working together. Here are a few of our partners' thoughts on why they are part of the Institute movement.



## Wagstaff, Inc.

Barb Parkes, President

Wagstaff recognizes the value of developing our next generation. We know students need multiple pathways, and we are committed to introducing them to the wonderful career opportunities available in manufacturing. Our company's future depends on it just as much as our community. We're committed to working together with our partners for our future success.



## MacKay Manufacturing

Katie MacKay, Executive Vice President

The challenges presented by today's workforce shortage are not new. Employers must make the investment to develop interest and skills early to drive qualified employees to careers in the trades. MacKay recognizes the Institute as a bridge to find and develop our future workers. We've hired prior Institute graduates who have become some of our most promising new employees.



## Doug Edmonson

Director of Career & Technical Education (CTE)

East Valley School District partners with the Institute to promote manufacturing to our students. Many students are best matched with industry careers and the Institute shows them the path. We've seen significant growth in our welding, engineering, and construction classes from the Institute. Most important, we've seen the positive changes in the lives of the kids who graduate from the program.



## Mark Mattke

CEO, Spokane Workforce Council

Our mission is to build a skilled workforce. SWC is committed to helping people explore careers, improve skills, and find jobs. The Institute is perfectly aligned to help students at the cusp of entering the workforce to improve their readiness for career success. We gladly support the Institute and its partners to help develop tomorrow's workforce through hands-on career experience.







# Attitude

**We want you to want to work and love what you do. Attitude largely defines your experience, relations, performance, and outcomes.**

*"This Institute was amazing! I would like to thank my team for working so hard this past 15 days to make our project (and make it good)."*

*-Gabriel*





# STUDENT RUN BUSINESS

## Learning


When students run the business, they experience first-hand how things work. They find out what it takes to come up with the idea, design it, manufacture it, and sell to a customer (or many customers). This is often the first experience where students can recognize the value of hard work. The first time they take money from a real customer in exchange for the product they have made is unforgettable. That is what it takes for students to understand what, why, and who to focus on in business.

## Earning

Teams design and manufacture real products. They help establish price and figure out how to sell the products throughout the course of the Institute program. Principles of manufacturability, lean, efficiency, and quality are at the core of our practices to ensure the best products possible. No matter their career of choice, our graduates increase their workforce readiness as they understand the scope of business.

## Growth

We provide the real deal when it comes to the work environment. Teams have assigned production quotas, deadlines, and bosses who are there to guide, encourage, and give direct feedback. Students are expected to work hard, play hard, and pitch in to achieve the overall goals - just like real work.



The direct customer experience allows students to see first-hand why their work matters. They can take pride in showing, selling, and delivering a well-made product.



# WHAT WE MANUFACTURE

Each year's products vary according to market demand, materials, and program needs. We typically manufacture in wood and metal. This allows us to teach quickly, let students make mistakes, help them to learn, and efficiently meet our goals in a cost effective approach. Here are just a few of the products we've made.



## Firepit Welding/Metal

Metallic outdoor firepit at just under 2-feet tall delivers a fireplace featuring a thermochromic treated pit with bear paw decals cut out for optimal airflow.



## Step Stool Wood

Here's the PERFECT solution to reach that item. Practical, elegant, and durable, this one-of-a-kind step will help you get anything out of reach. It works AND looks nice in any room.



## Birdhouse Woods/Light Metal

Handmade birdhouse for the backyard feeder, bird lover, birder, or collector. This sturdy, solid-wood construction withstands the weather with waterproof stain, metal roofing, and a complimentary hanger to get you started.



## Patio Bench Wood

Our bench provides a comfortable long-lasting experience that will help you enjoy even the worst of days. Get the perfect bench in your home, garden, patio/porch, and even your backyard.

## Hardwood Box Wood

This box can hold your precious memories, jewelry, or games with a detachable lid that can be used as a dice tray. It can also be used to store game pieces, craft supplies, keepsakes and heirlooms.



## Cribbage Board Wood

This handcrafted cribbage board with a detachable top leads to a storage compartment that houses pegs and cards for play at any time. This eliminates the hassle of locating cards whenever you want to play. It fits inside most travel bags for transport, allowing you to play on the go.



## Chess Board Wood

Our handcrafted chessboard is perfect for anyone looking for a unique experience. Our board is made with beautiful oak and walnut providing a natural aesthetic. It can also be used as a centerpiece in any setting.





# THE EXPERIENCE



## Students Work in Product Teams

Teamwork is an essential competency in any job. We teach it as participants work in teams responsible to manufacture a specific product line. They collaborate on design, process, materials, and output. As challenges arise, teams must work together to solve problems, find new solutions, and meet the ever-changing goals placed on them each day.

## Exploration of Career Pathways

We partner with several Career Pathway providers to help students experience many ways to pursue the next step. Activities such as Machining Day at Spokane Community College give students a hands-on learning opportunity to operate CNC machinery. Each group runs a Welding Day where professionals from the industry provide instruction to give students real experience using new tools.



## Manufacturing Tours

Sponsors provide tours to students that let them see first-hand how manufacturing is done in different companies. They learn about careers that are available and steps they can take to pursue them. Students learn from local manufacturers about the manufacturing process and how it applies, regardless of their career track.

## Real Projects

Participants engage in manufacturing real products for real customers. There are some things you can't learn except from a live work environment. We create those situations where students must solve problems, collaborate with others, think beyond what is possible, and deliver on their commitments. Along the way, they pick up new skills in the use of tools, products, and processes that can be applied across multiple careers.



## Accomplishment

As students practice what they learn, they set and achieve new goals to do things they have never done before. Building new competencies requires work - and the ability to learn. When they apply these lessons, they recognize patterns of success. Students feel a sense of accomplishment and pride as they hit their goals and sell their products.



*"This experience was a good chance to learn new things. Not just hands on skills, but other things like time management, leadership, and myself as a person."*

*-E. Tobaben*

# Impact

The Institute provides a different experience for each person. The value of that experience relies heavily on their attitude, contribution, and effort. In other words, the more they put in, the more they got out of the program.

Our goal is to increase awareness and interest in careers in the trades. This program delivers on its goal and increases awareness of career paths in the industry. Below are some points of feedback from the 2023 Institute by students showing the program's impact.

**Q: Before attending the Institute, how interested were you in exploring a career in manufacturing or the trades?**

## BEFORE THE INSTITUTE

Extremely Interested	16.67%
Interested, but Still Deciding	16.67%
Somewhat Interested	25.00%
Thought about it, but not seriously	12.50%
I had NEVER considered it	29.17%

**Q: Based on your Institute experience, how interested are you in exploring a career in manufacturing or the trades?**

## AFTER THE INSTITUTE

Extremely Interested	33.33%
Interested, but Still Deciding	37.50%
Somewhat Interested	20.83%
Very Little Interest	4.17%
Not Interested	4.17%



# CAREER PATHWAYS

We know there is more than one way to become workforce ready. Universities and 4-year degrees are still needed for careers like Engineering, but there are many pathways available to students.



## University / 4-Year Degree

A traditional 4-year university degree is expected to earn a bachelors degree. This is common for Engineers in manufacturing. It requires a lot of preparation in high school, maintaining good grades, and most manufacturing-related university programs will require a lot of math, using numbers, problem solving, designing, computers, and more. It takes a bit longer, and Engineers typically start with a higher salary, but you should also consider the extra years before you can begin to work and the costs of education (which may result in student loan debt).



## Community College / Trade School

Pursuing a 2-year or shorter program resulting in an associate degree, certificate, or other certification or industry recognized credential is a great opportunity to get into the workforce faster. With less time, lower cost, and specific skills gained through a fast-paced program, students can graduate begin working full-time with better qualifications sooner. It may even be possible to earn some of these classes while in high school through dual credit and Running Start programs.



## Apprenticeship

The model of formal learning while on the job is centuries old. It's time tested and proven effective, especially for careers requiring skills, details, technical abilities, and similar competencies. Working with a registered apprenticeship program such as Machinists Institute allows students to "earn as they learn," resulting in graduation with little to no debt and a highly marketable skill.



## Industry Recognized Credential / Certificate

Students who are not quite ready for a full program (or may be missing a few classes) can earn Industry-Recognized Credentials (IRCs). These are obtained through typically shorter courses that teach, test for, and certify a given skill. With this certificate, an employee or candidate can demonstrate to an employer that they are qualified to perform the job.



## Work Based Experience

There are some things that cannot be learned anywhere else except at work. In some positions, qualifications may only come through experience. Some students may not be ready to pursue education or formal training, and may be better suited to a program that creates a one-on-one accountability. In other cases, work can enhance and accelerate learning. In all cases, on-site work experiences at the workplace can improve student career preparation.



# EMPLOYER VALUE

Employers seek to employ and retain qualified employees who are the BEST MATCH for the job. It's more than just who has the most education or experience. It's the "whole" person, their behaviors, and characteristics that make them successful.

Employers look for common soft skills, technical skills, and work ethics in their employees. Regardless of the ultimate career pursuit, the Institute helps to instill and grow these qualities.

## SOFT SKILLS

- Interpersonal communications
- Teamwork
- Planning
- Goal setting
- Leadership
- Time management
- Problem-solving
- Creative-thinking
- Crisis management
- Group-based learning
- Interpersonal collaboration
- Team-based work dynamics
- Solution-oriented approach
- Respect-driven work environment
- Professional growth
- Personal development

## TECHNICAL SKILLS

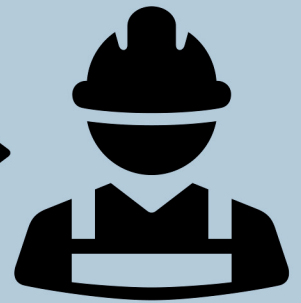
- Intro to design
- Measurements
- Materials
- Small hand tools
- Shop equipment (saws, drill press, etc.)
- Production planning
- Quality assurance
- Intro to welding
- Intro to machining
- Intro to product assembly
- Intro to product finishing
- Intro to quality management
- Intro to print reading
- Essentials of construction

## CAREER READINESS

- Preparing for a job
- Arriving to work on time
- Building a strong work ethic
- Pride in quality work
- How to find a career path
- Career interest search
- Post high-school preparations
- Preparing for a job or career
- Post-high school training or education
- Resume writing & cover letters
- Interviewing skills
- LinkedIn and other social media skills
- Exclusive connections with Spokane Community College & apprenticeships
- Career path readiness exercises

## BUSINESS SKILLS

- Intro to business plans
- Intro to market research
- Intro to product design
- Intro to competitive analysis
- Intro to customer analysis
- Intro to marketing
- Business analysis
- Product sales and promotion
- Customer service
- Product pricing
- Supply and demand
- Organizational communications
- Inter-departmental collaboration
- Intro to operations management





# CAREER INTERESTS



## Manufacturing Production

Students are exposed to highly skilled, well-paying production-related careers such as welding, machining, CNC operations, production assembly, and more. Students gain first-hand experience in production roles, learning processes, operations, manufacturing, quality, and finishing. They recognize the need to “keep the end in mind” at every step of the process.



## Engineering

Teams are exposed to the design process for products. They learn about steps in design, engineering, process planning, workflow, quality assurance, and the production process. As participants learn to read plans and translate them to models, prototypes, and products through fabrication, they improve understanding and skill in designing better products.



## Business & Management

A significant part of the program is sales. Teams are expected to manufacture and profitably sell their products during the Institute, and this requires an understanding of costs, customers, markets, and business. All students are exposed to what makes business run and steps to improve sales, profits, and production.



## Construction

The Institute teaches core principles using wood products. General use of tools, processes, and product design are founded on basic construction principles to establish a baseline of shop skills. Many products continue to use carpentry skills and designated locations are dedicated to full construction related projects.



## Support & Logistics

Other functions are critical to the overall success of any manufacturing operation. Quality assurance, shipping, materials handling, finishing, logistics management, maintenance, mechanics, and related technical positions help to make the business successful. Participants engage in multiple functions related to these areas and are exposed to careers in these fields.



# PATHWAY PARTNERS



## **Sam Tevis, Spokane Community College**

Sam is the Lead Faculty for SCC's Machining program. Employers count on Sam and the other faculty to deliver high quality training that prepares future CNC Machinists. We challenged Sam to find a way to bring over 60 participants to SCC and let them use (not just watch) the CNC machines. He did it!! Because of our partnership, we have exposed multiple Institutes to careers in Machining first-hand. Knowing that it uses a lot of technology, complex tools, CAD/CAM software, and more, no wonder companies are willing to pay great salaries for these employees.



## **Cal Christen, MacKay Manufacturing, Retired**

Cal is a legend in the world of machining. As a long time trainer at Wagstaff, instructor for SCC, and trainer at MacKay Manufacturing before retiring, Cal loves to help others learn. He was a founding partner of the Institute and has participated each year. His specialty is mentoring kids through the process of learning shop skills, problem solving, and working through process improvement. His coaching style is one of a kind, and he has inspired many to pursue manufacturing as a career.



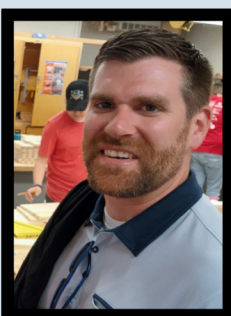
## **Jessica Dempsey, Educational Service District 101**

Any great program has an army of people working behind the scenes to make the magic work. Jessica (pictured on the right) is that person. She facilitates relationships across multiple school districts, agencies, organizations, and platforms to connect and drive movement. This has helped to create a network of local agencies and organizations working together with a singular purpose to solve a common challenge.



## **Craig Cordill, Mechanical Engineer, Wagstaff**

Each year, Craig has been at the front lines helping the Institute not only deliver the product, but to continuously improve. He delivers instruction to students on product design. More importantly, he comes back in the off season to ask, "what can we do better?" This caused us to fundamentally shift how we approached the Institute in 2023 which led to the mindset leading to a Franchise model. This innovative thought process allows us to spread the Institute model to more places and more people thanks to Craig's innovative mindset and leadership.



## **Lance Beck, CEO, Greater Spokane Valley Chamber**

The Greater Spokane Valley Chamber of Commerce is dedicated to workforce development. When Lance learned about the Institute the first year, he jumped behind it with support from the Chamber's Foundation to dedicate a scholarship to a Spokane Valley graduate. The Foundation awards scholarships each year to high school graduates seeking to pursue careers in the trades. They continue to actively support the Institute among Chamber members and through the ongoing scholarship designation.



# IN THE NEWS



## Students Design Renovated Wood and Metal Shops for Learning in the Trades

July 2023

East Valley High School is revamping their wood and metal shops to include updated machines and new opportunities for learning. The changes are happening in partnership with Wagstaff. The district and Wagstaff have partnered over the past four years to host a summer Institute to expose students to jobs in manufacturing. “This is about expanding workforce development in our area,” said Doug Edmonson, the district’s career and technical education director. “The whole thing is to produce and manufacture products.”



## PMI Celebrates Remarkable Graduation Success

July 2023

Since its inception the Institute has shown remarkable growth, with this year’s graduates nearly doubling the number of graduates from the previous year. The initiative is led by prominent manufacturing companies, such as Wagstaff, Inc., MacKay Manufacturing, and Pearson Packaging Systems. Together, they have united their efforts to develop the next generation of skilled workers.



## Governor Spotlights Institute Graduate

January 2020

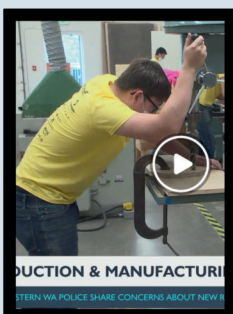
In his State of the State Address, Governor Jay Inslee not only touted the success of the Production and Manufacturing Academy, but honored the program’s top graduate, Olivia Perkins, with personal recognition and a seat in the gallery. Governor Inslee related how highschooler, Olivia Perkins, “joined the Production and Manufacturing Academy to get exposure to hands-on welding. She wanted to create and sell her own metal artwork. Because of her efforts, she received a full scholarship to Spokane Community College and will become a professional welder because of her academy experience.”



## \$200,000 Grant Awarded to Transform Shop

June 2023

Wagstaff in collaboration with the East Valley School District and the Inland NW Aerospace Consortium (now NIMA), is thrilled to announce a significant milestone in workforce development. The partnership was awarded a \$200,000 grant through the Evergreen Grant from Washington State Department of Commerce. These funds will be used to make vital improvements to East Valley’s High School (EVHS) shop facilities. The renovated facilities will be aligned with industry needs, accelerate progress in workforce development, and enhance the programs and opportunities offered to students.



## Made in the Northwest: Production and Manufacturing Academy

July 2021

18 local high school students are getting real world manufacturing experience in the three week long Production and Manufacturing Academy at East Valley High School, which is designed to spark an interest in the trades. Larson says the students go through the entire manufacturing process from start to finish. They create a product, design it, build it and even sell it. (KXLY.com)



# What They Learn

The following are STUDENT COMMENTS about what they learned from the experience.

**Teamwork**

**Leadership**

**Managing Change**

**Communication**

**Deadlines**

**New Skills**

**Time Management**

**Problem Solving**

*"It was fun and a good learning experience because I got to learn what it's like for a manufacturing job and made some new friends."*

*-Miles*



*"The Institute has taught me many valuable skills. Before this, I had never stepped into a shop, but now I can use any of the machines...even if I don't go into a manufacturing job, I will still use these skills."*

*-Chloe*

# IT TAKES A COMMUNITY

## FOUNDING BUSINESS PARTNERS AND COMMUNITY INVESTORS

Thank you to our many sponsors and supporters! With more kids, we have increased costs to cover stipends, materials, food, and fees. Your help ensures our ability to continue to serve kids and develop our future workforce.



WAGSTAFF, INC.

Wagstaff, Inc. is a globally recognized manufacturer in the aluminum industry. They helped found the Institute as a way to build the community and workforce by investing at the core of the cycle.



Career Connect WA is committed to supporting programs focused on career exploration, preparation, and launch. The Institute is a proud partner of CCW to achieve these objectives by improving the workforce readiness of high school graduates.



MacKay Manufacturing stands for quality and precision. They depend on a skilled workforce to deliver expertise in equipment and processes. The Institute helps develop future employees.



The Spokane Workforce Council lends support to the Institute as a workforce-aligned program that directly helps youth prepare for the workplace.



Pearson Packaging prides itself in offering automation and optimization for business packaging processes. They see the Institute as a way to create interest and develop student skills.



The NW I-90 Manufacturer's Alliance values the opportunity the Institute provides to expose students to career pathways. Area manufacturers can access more information to support the program through NIMA.



OTD is a workforce development leader. They align efforts of many organizations to produce results such as the Institute.



Apprenticeship pathways are essential to building a qualified workforce in manufacturing. Manufacturers Institute is a partner in offering support to students.



Collins Aerospace partners with customers to redefine the future of aerospace. They rely on the Institute to lay the foundation for the future.



The Community College offers a critical pathway for students to earn credentials in manufacturing careers. Our partnership exposes students to pathways to achieve education, training, and success.



Hansen Industries was an early contributor to the program, allowing it to launch, build and continue to grow.

## OTHER SIGNIFICANT BUSINESS COMMUNITY PARTNERS



## Want to Join the Community?

We are always seeking additional partnerships that can help facilitate the program. If you, your company, or association are interested in joining our partnership, please reach out to us by email or phone.



# HOW TO SUPPORT



## Financial Sponsorship

The Institute depends on its business partners to fund the costs of the program. These include costs related to stipends, materials, and overhead. Our sponsors have allowed us to grow the program each year and deliver a high quality program. We work with Spokane Workforce Council as our non-profit partner so your contributions remain tax deductible.



## Materials

The Institute spends several thousands of dollars on program and building materials. Our products require specific materials, and businesses may choose to directly donate wood, metal, and many consumables we use through production. Please contact us and we can provide details.



## Tours

We depend on our sponsors to allow tours of their facilities to give participants a view of how manufacturing is done by companies. Participants tour several locations during the program to learn about processes, products, and careers available within the i



## Mentorship

We have found great value in bringing mentors from the outside to work with teams. They help give perspective to ideas, serve as content experts, help in brainstorming ideas, and otherwise assist teams as needed. Mentors also create a networking opportunity for students to connect with businesses and professionals in the field. This support is a critical part of many students' career journey.



## READY TO PARTNER?

If you're ready to partner with the Institute to deliver this amazing career opportunity, please reach out. We would love to answer questions or learn more about your needs.

 509-219-9997 (via Optimal Talent Dynamics)

 [support@manufacturinginstitute.net](mailto:support@manufacturinginstitute.net)

 [www.manufacturinginstitute.net](http://www.manufacturinginstitute.net)

**Direct Donation Link:** <https://spokaneworkforce.org/donate-now>





**The Production & Manufacturing Institute**  
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