

IMT Apprenticeship Program

Catalyst Connection's Industrial
Manufacturing Technician (IMT)
Apprenticeship Program



Apprenticeships

Catalyst Connection — Assisting Manufacturers with their People, Process and Products



CATALYST CONNECTION
Your Strategic Partner for Manufacturing Growth



Catalyst Connection’s Industrial Manufacturing Technician (IMT) Apprenticeship Program helps to address a leading concern of many manufacturing companies — a shortage of skilled workers.

The Industrial Manufacturing Technician Apprenticeship helps entry-level workers in manufacturing quickly enhance their skills and advance with their current employer. Due to changing manufacturing technologies, entry-level workers require higher skills than before and employers are struggling to recruit and retain these type of workers.

The IMT program is a state registered apprenticeship to help meet these employer needs.

IMT Apprenticeship Program

— powered by Catalyst Connection

Catalyst Connection • 2000 Technology Dr., Pittsburgh, PA 15219-3110 • TEL: 412.918.4300 • catalystconnection.org
A Pennsylvania Industrial Resource Center

www.CatalystConnection.org





IMT

Apprenticeship Program

— powered by Catalyst Connection

FOR APPRENTICES

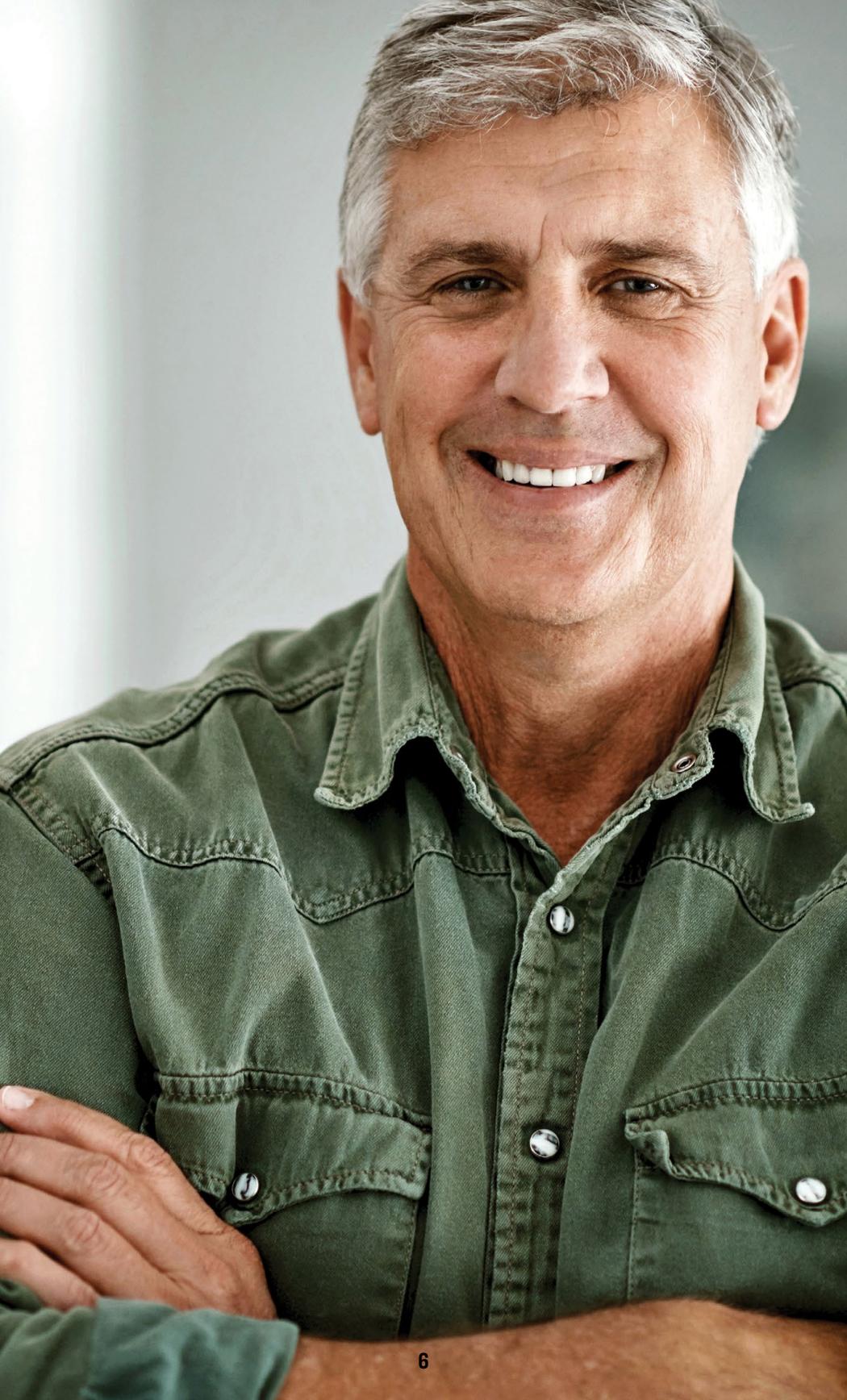
benefits include:

- Improved skills and competencies that meet the specific needs of the employer
- Incremental wage increases as their skills improve
- On-the-job training and occupation focused education
- Career advancement
- Industry issued, nationally recognized credentials
- Articulation agreements between certain apprenticeship training programs and 2- and 4-year colleges that create opportunities for college credit and future degrees

FOR EMPLOYERS

benefits include:

- Customized training that results in highly skilled employees trained to industry/employer specifications
- Increased productivity and knowledge transfer due to on-the-job learning from an assigned mentor combined with related technical instruction
- Enhanced retention 87 percent of program completers in 2011 were still employed nine months after completing their apprenticeship
- Emphasis on safety training that may reduce workers' compensation costs
- A stable and predictable pipeline for the development of qualified workers
- Recognition of the training program
- A systematic approach to training that ensures that employees are trained and certified to produce at the highest skill levels required for that occupation
- The ability to conduct a ready assessment of where the employer and employee are in terms of the continuous improvement process
- A proven training model that allows employers to set the benchmark and the structure that can determine the Return on Investment in training dollars
- Versatile and multifunctional human capital investment in order to respond quickly to market conditions
- Create a culture of continuous learning and improvement to meet the needs of the next generation of industrial workers



IMT Apprenticeship Program — powered by Catalyst Connection

Trains Workers to:

- Set up, operate, monitor and control production equipment
- Help improve manufacturing processes and schedules to meet customer requirements
- Understand manufacturing as a business system that integrates multiple disciplines, processes and stakeholders
- Efficiently and safely manage raw materials/consumables



IMT on-the-job Competencies

- Protect self and other workers from accidents and injuries
- Set-up production equipment
- Operate production equipment
- Produce Quality Products
- Interpret technical information
- Measure and inspect work using mechanical tools and testing equipment
- Demonstrate knowledge of routine equipment maintenance
- Demonstrate knowledge of inventory and material processes
- Demonstrate knowledge of trends and the current state of the business
- Demonstrate continuous improvement
- Tailored options

What is IMT?

→ This registered apprenticeship program is a hybrid approach providing production workers with the knowledge and competencies needed in the advanced manufacturing environment. A hybrid approach integrates time-based learning combined with competency-based training.

Registered apprenticeships utilize an “Earn and Learn” approach to building worker skills. The IMT program provides 3,000 hours of structured technical instruction. This instruction is comprised of 2,736 hours of on-the-job training (OJT) from experienced mentors assigned by the employer and 264 hours of related technical instruction. All IMT apprentices are employees of a specific company, earning wages, benefits, and seniority while they learn new skills.

On-the-job Training

→ OJT follows a competency based model which utilizes the supervision of a training mentor as IMT apprentices are assigned tasks that build their skills and competencies in the full range of the production work cycle within their company. The OJT is delivered in accordance with a carefully developed training plan. This plan, called the Job Book, spells out detailed competency levels for skills including equipment set up and operations, safety, routine equipment maintenance, use of mechanical tools and testing equipment. The Job Book allows for customization to each company’s specific systems.

Each apprentice is assigned an experienced mentor who demonstrates new skills, observes and provides feedback on the apprentice’s performance and signs off on the date when the apprentice shows mastery of the demonstrated skills. When the employer determines the apprentice has mastered all of the skills and competencies in the Job Book, it is then reviewed before awarding the completion credential.



Courses for Related Instruction:

- 4 Manufacturing Standards Skills Council (MSSC) modules:
 - Safety
 - Quality practice & measurement
 - Manufacturing processes & production,
 - Maintenance awareness
- Industrial Math for the Trades and blueprint reading
- Communication for the Trades
- First Aid/CPR
- OSHA 10
- Train the Trainer
- Lean Manufacturing 101
- Interpersonal Skills
- Practical Problem Solving
- Additional requirements identified by employers

Additional Related Course Examples:

- Geometric Dimensioning & Tolerance
- MSSC module practice exams
- 5S System for Workplace Organization
- Effective Root Cause & Corrective Action
- Fundamental Employment Skills
- Cellular Flow Manufacturing

Related Technical Instruction

→ Apprentices must successfully complete courses in industrial math, industrial communications, manufacturing technology systems and processes, industrial blueprint reading, OSHA 10 and First Aid/CPR to obtain their IMT registered apprenticeship credential.

185 hours of the related instruction will be standard in the program. These 185 hours include four modules of the MSSC Certified Production Technician curriculum. Each of these modules include an exam, which once completed, earns an apprentice a Certified Production Technician certificate, which is nationally recognized.

The instruction also includes courses on interpersonal skills, lean manufacturing and practical problem solving.

The additional 79 hours of related technical instruction can be customized to meet each company's specific technical needs.





IMT Apprenticeship Program — powered by Catalyst Connection

Key features of the IMT Apprenticeship Program:

- Stackable apprenticeship that is a foundation for multiple career pathways
- Easily adapted for different manufacturing contexts, different sized companies and different types of manufacturing schedules
- Leads to industry-recognized credentials as well as college academic credits
- Employers pay wages for the duration of training and workers receive wage increases upon completion of the apprenticeship
- Apprentices are regular, full-time employees and earn regular wages while they complete training



FOR MORE INFORMATION

about Catalyst Connection and the IMT Apprenticeship Program contact:

Mara Connelly, Consultant,
Workforce Development

Catalyst Connection
2000 Technology Drive
Pittsburgh, PA 15219

412.918.4248

mconnelly@
catalystconnection.org

IMT

Apprenticeship Program

— powered by Catalyst Connection

Catalyst Connection's *Explore the New Manufacturing Program* helps address a leading concern of manufacturing companies — finding skilled workers. Ask us about ways to build a future pipeline of talent with local schools, community programs, and STEM initiatives.

Programs include:

- Manufacturing Innovation Challenge
- Student Video Contest
- Hosting teachers for tours and professional development
- Curriculum Advisory Committees
- Internships
- Regional STEM competitions (BotsIQ, Fluid Power Challenge, etc.)

**Sponsors: Chevron and
Claude Worthington Benedum Foundation**



**CLAUDE
WORTHINGTON
BENEDUM
FOUNDATION**



IMT Apprenticeship Program

— powered by Catalyst Connection

We provide consulting and training services to small manufacturers in southwestern Pennsylvania, accelerating revenue growth and improving productivity. Through active collaboration with our clients and the manufacturing community at large, we contribute to the growth, vibrancy, and ongoing robustness of manufacturing in our region.

Catalyst Connection is supported, in part, by the Commonwealth of Pennsylvania, Department of Community and Economic Development, and by the National Institute of Standards and Technology's Hollings Manufacturing Extension Partnership.

To collaborate with other manufacturers and industry experts, visit —
www.MyManufacturingConnection.org



www.facebook.com/catalystconnection



www.linkedin.com/company/catalyst-connection



www.twitter.com/MadeinSWPA



www.youtube.com/user/CatalystConnection



CATALYST CONNECTION™
Your Strategic Partner for Manufacturing Growth

Catalyst Connection • 2000 Technology Dr., Pittsburgh, PA 15219-3110 • TEL: 412.918.4300 • FAX: 412.687.2791
TOLL FREE: 412.918.4300 — A Pennsylvania Industrial Resource Center

www.CatalystConnection.org