

NEXT LEVEL-APPRENTICESHIPS



2025 BROCHURE

INDUSTRY 4.0 AND INDUSTRIAL
ELECTRONIC TECHNICIAN APPRENTICESHIPS



Supported by:



Federal Ministry
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STRENGTHEN YOUR WORKFORCE WITH APPRENTICESHIPS

Finding and retaining skilled workers is one of today's greatest challenges. Apprenticeships offer a proven, sustainable solution to equip your company with the talent it needs today while developing the leaders of tomorrow.

By combining hands-on training with classroom instruction, apprenticeships align employee development directly with your company's processes, culture, and long-term growth goals.

WHY APPRENTICESHIPS WORK FOR BUSINESSES

CLOSE THE SKILLS GAP. Address workforce shortages in critical areas like mechatronics, CNC machining, and industrial electronics. Apprenticeships create a reliable pipeline of highly skilled employees.

TRAIN FOR YOUR NEEDS. Apprentices learn on your equipment, within your culture, and according to your company's processes—ensuring skills transfer seamlessly into operations.

IMPROVE RETENTION. Apprentices who grow within your company are more engaged and loyal. Defined career paths and advancement opportunities foster long-term retention.

BOOST COMPETITIVENESS. With a workforce trained in cutting-edge technology and methods, your company gains an advantage in productivity, innovation, and quality.

GAIN RECOGNITION. Apprenticeship programs position your company as a leader in workforce development, earning industry awards and community respect.

ICATT APPRENTICESHIP PROGRAMS. Provide structured frameworks for competency-based training. Companies benefit from standardized occupational profiles, internationally recognized credentials, and support in trainer development—ensuring consistent program quality.

UNDERSTANDING GERMAN-

WHY GERMAN-STYLE APPRENTICESHIPS

German-style apprenticeships, like the ICATT Apprenticeship Program, combine classroom learning with hands-on training, creating a workforce that is both highly skilled and adaptable. The model is designed to meet labor market needs by blending 70% practical training with 30% classroom instruction, ensuring apprentices gain both technical expertise and broader professional skills.

KEY FEATURES

EDUCATION & TRAINING. Apprentices split time between employers and vocational schools, learning job-related and general subjects that support long-term career growth.

FAIR COMPENSATION. Apprentices are paid, with wages that increase as their skills advance.

CERTIFICATION. Programs last 2–3.5 years and culminate in rigorous exams, leading to internationally recognized qualifications.

PROGRAM STRUCTURE

YEAR 1: Build a foundation in core competencies.

YEAR 2: Deepen skills, specialize, and prepare for exams.

YEAR 3: Advance specialization and take on independent work, delivering real value to employers.



STYLE APPRENTICESHIPS



WHY IT WORKS

PROVEN HISTORY: A system rooted in centuries of knowledge transfer, widely accepted in society.

MUTUAL BENEFITS: Companies develop talent tailored to their needs, while apprentices gain paid education, career pathways, and secure employment.

SHARED SUPPORT: Colleges, trainers, companies, and government institutions all contribute to quality and consistency.

STANDARDIZED & FLEXIBLE: Over 325 professions are covered by national standards, yet programs can be adapted to company size and industry needs.

IMPACT IN NUMBERS

1.22 million apprentices annually across 327 professions.

91% pass rate, with 77% of apprentices retained by their employer after graduation.

IN SUMMARY

German-style apprenticeships offer a scalable, adaptable, and proven solution for developing a modern workforce—ensuring industries have the talent they need for the future in Industry 4.0. The ICATT Apprenticeship Program is certified by the German Government to ensure it meets international standard, bringing German-style apprenticeships to US based companies.

INITIATING A TECHNICAL APPRENTICESHIP

Technical apprenticeship programs are a proven strategy for building a skilled workforce while creating clear career pathways. As new technology is brought in, and we enter Industry 4.0 landscape, workers that are efficient in the new technical landscape is becoming more important than ever.

FOCUS AREAS AND BENEFITS

CRITICAL TECHNICAL ROLES. Apprenticeships in mechatronics, industrial electronics, and advanced manufacturing address workforce shortages and ensure that employees are trained on proprietary and complex equipment.

DEDICATED TRAINING FACILITIES. High-tech, safe training hubs separate from production allow apprentices to practice skills through shadowing, real-world tasks, and hands-on exercises in machining, robotics, pneumatics, PLCs, and electrical systems.

COMPREHENSIVE SUPPORT. Apprentices benefit from tuition assistance, progressive wages, healthcare, paid time off, and opportunities for continued education, often including college degrees or dual certifications.

CAREER PATHWAYS. Structured programs prepare apprentices for diverse roles, from technician positions to engineering and leadership opportunities. Programs embedded into company HR strategies also support long-term growth and retention.

KEYS TO PROGRAM SUCCESS

LEADERSHIP COMMITMENT. Programs thrive when supported at all levels of the organization.

STRONG PARTNERSHIPS. Collaboration with local colleges and workforce organizations aligns training with industry needs.

COMPETENCY-BASED TRAINING. Clear skill profiles and milestones ensure apprentices develop the right technical competencies at the right pace.

TRAINER DEVELOPMENT. Mentorship, communication, and structured trainer training are essential to delivering high-quality instruction.

RETENTION DRIVERS. Positive workplace culture, defined career paths, and recognition of apprentices' contributions increase long-term engagement and retention.

By combining structured learning, real-world experience, and comprehensive support, technical apprenticeship programs cultivate a pipeline of skilled professionals ready to meet today's workforce demands while preparing for the future. Companies will often begin seeing a tangible return on investment as apprentices begin taking on independent work.

RECRUITING THE NEXT GENERATION OF TECHNICAL TALENT

Attracting and retaining skilled apprentices in technical fields comes with unique challenges. By understanding what motivates today's students and adapting strategies accordingly, companies can build strong and sustainable talent pipelines.



KEY CHALLENGES & SOLUTIONS

GENERATION Z

CHALLENGE: Aligning workplace expectations with apprentices' needs.

SOLUTIONS:

- Provide soft skills training (business etiquette, communication, adaptability, time management).
- Offer recognition, mental health support, and work-life balance.
- Prepare trainers to engage effectively with Gen Z.

ACADEMIC OVEREMPHASIS

CHALLENGE: Growing preference for academic or office careers over technical fields.

SOLUTIONS:

- Highlight the advantages of vocational training.
- Showcase career growth opportunities after apprenticeship.
- Present long-term prospects in technical professions.

LACK OF INTEREST IN TECHNOLOGY

CHALLENGE: Sparking enthusiasm for technical careers.

SOLUTIONS:

- Partner with schools for early exposure.
- Provide hands-on experiences in technical professions.
- Emphasize innovation and career pathways in STEM.

STEM SKILLS

CHALLENGE: Students lacking foundational technical skills.

SOLUTIONS:

- Offer supplemental lessons and tutoring.
- Show how STEM builds personal growth and career options.
- Encourage creativity and problem-solving.

DIGITIZATION

CHALLENGE: Balancing digital learning with hands-on training.

SOLUTIONS:

- Strengthen manual and technical skills
- Integrate apprentice's digital strengths into training.
- Blend traditional teaching with digital support tools.

COMMUNITY ENGAGEMENT: BUILDING AWARENESS EARLY

Strong recruitment starts long before apprentices apply. By investing in school and community relationships, companies can introduce technical careers to students, educators, and families in meaningful ways.

TRADITIONAL OUTREACH

- Classroom visits and guest presentations (especially with juniors and seniors).
- Participation in STEM or career-based school groups.
- Career fairs with information tables and branded giveaways.

NON-TRADITIONAL OUTREACH

- Company tours and job shadow opportunities.
- Partnering with elementary schools for STEM projects.
- Hosting school administrators, counselors, or teacher development days.
- Joining school advisory boards to guide curriculum alignment.
- Sponsoring local sports teams and community programs.

These strategies help companies build visibility, spark student interest, and create trusted partnerships with schools—laying the foundation for a stronger apprenticeship pipeline.

INTERNSHIPS: YOUR TALENT PIPELINE FOR APPRENTICESHIPS

Structured internships give companies a head start in finding, training, and retaining future apprentices. By providing early, hands-on experience, internships turn promising students into skilled, motivated candidates ready for long-term technical and commercial roles.

WHY INTERNSHIPS WORK

START EARLY. Engage students in middle or high school to spark interest in careers.

HANDS-ON EXPOSURE. Allow interns to explore real roles, understand workplace culture, and develop practical skills.

MENTORSHIP & SUPPORT. Guidance, tutoring, and structured learning ensure success and engagement.

DIRECT PATHWAY TO APPRENTICESHIP. High-performing interns can transition seamlessly into multi-year programs.

STRATEGIC WORKFORCE DEVELOPMENT. Internships create a reliable, skilled talent pipeline that aligns with business needs.

THE IMPACT

Internships not only introduce students to career possibilities—they reduce recruitment time, improve retention, and strengthen the long-term workforce, ensuring your apprenticeship programs have motivated, capable candidates ready to excel.





PREPARING YOUR APPRENTICESHIPS FOR INDUSTRY 4.0

WHY IT MATTERS

Industry 4.0 and AI are transforming manufacturing and technical careers at unprecedented speed. To stay competitive, companies must adapt apprenticeship and training programs to build a workforce that is technically skilled, digitally fluent, and physically capable.

WHY KEY INSIGHTS FOR APPRENTICESHIP PROGRAMS

1. START EARLY, ENGAGE OFTEN

- Successful programs begin in middle or high school, introducing students to hands-on vocational skills.
- Early exposure develops both technical competency and physical skill, essential for skilled trades.
- Parents and communities play a critical role in encouraging vocational pathways.

2. HANDS-ON LEARNING MATTERS

- Theory alone is not enough—students must practice real-world skills.
- Skills development benefits from mentorship, immediate feedback, and applied learning.
- Neurodivergent learners thrive in hands-on environments where their unique strengths are leveraged.

3. INTEGRATE AI AND DIGITAL TOOLS

- AI is rapidly reshaping jobs, from automation to predictive maintenance.
- Use AI-powered assessments, simulations, and virtual environments to personalize learning and accelerate skill acquisition.
- Blended learning (online + live instruction) keeps training engaging and adaptable.

4. BUILD A COLLABORATIVE ECOSYSTEM

- Partner with schools, community colleges, technical centers, and local industry.
- Leverage grants, Massive Open Online Courses(MOOCs), and external experts to expand access to cutting-edge training.
- Strategic partnerships ensure apprentices have exposure to diverse technologies and career pathways.

5. FOCUS ON LIFELONG LEARNING

- The workforce must continuously adapt to evolving technologies and roles.
- Encourage apprentices to pursue transferable skills, hands-on experience, and professional networks.
- Personalized development plans help maintain engagement and retention.

THE IMPACT

Investing in early, hands-on, and digitally integrated apprenticeships builds a pipeline of adaptable, skilled, and motivated employees. Companies that adopt these strategies will future-proof their workforce, reduce turnover, and accelerate innovation.

- Local technical high schools and community colleges provide entry points for skilled trades and advanced manufacturing careers.
- Internships bridge the gap between classroom and workplace experience, providing early exposure to automation, robotics, and AI-driven systems.
- Trainers or external workforce experts can help companies manage dynamic learning programs efficiently.

SOFT SKILLS IN A TECHNICAL ENVIRONMENT

Technical expertise may open the door to an apprenticeship or a job, but it's soft skills that sustain long-term growth and career success. In Industry 4.0 and IET and other technical fields, employers often emphasize hard skills such as equipment knowledge, programming, or troubleshooting. While these are essential for getting hired, it is the ability to communicate, collaborate, and adapt that truly sets professionals apart.

Even the most technically gifted employee can struggle if they lack strong interpersonal and professional skills. Over the course of an apprenticeship and throughout a career, soft skills often become the key drivers of career mobility, leadership potential, and workplace impact.

SIX SOFT SKILLS THAT MAKE THE BIGGEST DIFFERENCE

1. COMMUNICATION

2. TEAMWORK

3. ADAPTABILITY

4. PROBLEM-SOLVING

5. PROFESSIONALISM

6. EMOTIONAL INTELLIGENCE

IMPLEMENTATION

COMMUNICATION. Strong communication ensures that instructions, updates, and feedback are clear and understood. Whether documenting a process, sending an email, or coordinating with a team on the shop floor, understanding your audience and purpose is essential. Clarity, timely follow-up, and a willingness to listen strengthen communication and build trust across teams.

TEAMWORK. No task is completed in isolation. Effective teamwork means sharing responsibilities, supporting colleagues, and ensuring that all tasks are completed efficiently. It also includes recognizing when a coworker needs help and fostering an environment of mutual respect. Working together helps apprentices contribute to the success of the entire team.

ADAPTABILITY. Manufacturing is an ever-changing environment where new projects, technologies, and challenges are constant. Adaptability means staying flexible, adjusting quickly, and maintaining a forward-looking mindset. Knowing how to pivot and respond effectively supports both individual growth and team success.

PROBLEM-SOLVING. Problem-solving is at the core of technical work. The ability to evaluate a situation, identify the root cause, and take steps toward a solution adds value to any team. Effective problem-solvers also collaborate with colleagues to ensure solutions are sustainable and prevent future issues.

PROFESSIONALISM. Professionalism means demonstrating reliability, a strong work ethic, and integrity. Being punctual, responsive to questions, and timely in communications supports smooth operations and builds trust with colleagues and supervisors. These qualities help apprentices stand out and lay the foundation for long-term career growth.

EMOTIONAL INTELLIGENCE. Emotional intelligence involves understanding your own emotions and recognizing the feelings of others. Being empathetic and considering how your actions and communication will be received prevents misunderstandings and supports collaboration. Managing emotions thoughtfully helps apprentices build strong relationships and navigate challenges effectively.

THE ROLE OF TRAINERS

Apprenticeship programs often bring in individuals with limited professional experience. This makes coaching and mentorship critical for developing the soft skills that complement technical training. Trainers play a central role by not only teaching processes and tasks but also modeling effective communication, teamwork, and professionalism. Apprentices learn best when they see these skills in action.

Providing constructive feedback is another key part of mentorship. When trainers offer guidance that is clear, supportive, and solution-oriented, apprentices gain the confidence to improve and grow. By demonstrating and reinforcing soft skills daily, trainers help apprentices understand their value and carry them forward into long-term career success.



THANK YOU!

In conclusion, we express our heartfelt gratitude to all the speakers who contributed to the success and uniqueness of our “Next-Level Apprenticeships - Transatlantic Exchange on Training Programs” Initiative workshops. Their valuable insights and expertise made these sessions truly exceptional. We would also like to extend our appreciation to our sponsor and all the participants for their active engagement.

Thank you once again for your participation and support throughout this series of workshops!

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WHAT'S NEXT?

Over the past three years, the Next-Level Apprenticeship Program has been a rewarding journey filled with workshops, annual study trips, and countless opportunities to connect and learn together. We are excited to announce we received a two-year extension to the program, we are grateful to all the participants, partners, and colleagues who made this possible. Special thanks to our sponsor the German Federal Ministry of Economic Affairs and Energy for funding this initiative.

As we look ahead, we are excited to introduce Next-Level Apprenticeships - Cluster Exchange of Transatlantic Training Partners. This project is designed to strengthen transatlantic collaboration between workforce development leaders across the US and Germany to address a challenge they both face: the critical shortage of skilled workers across diverse industries.

This initiative brings together well-rounded teams—community college leaders, high school educators, corporate training managers, and policy makers—from hand-selected U.S. regions to experience Germany's renowned apprenticeship system firsthand.

We look forward to continuing to support your transatlantic apprenticeship initiatives through this new chapter.



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ABOUT ICATT APPRENTICESHIPS

The **Industry Consortium for Advanced Technical Training (ICATT)** and its affiliate programs, the Michigan Advanced Technician Training (MAT2), and the Georgia Consortium for Advanced Technical Training (GACATT) are specialized apprenticeship programs focusing on advanced manufacturing, mechatronics, electronics, and business administration. They are designed to address the skills gap in the US workforce by providing a structured training pathway for individuals interested in pursuing a career in this field. The programs focus on high-demand occupations, ensuring that apprentices are well-prepared for successful careers in the ever-evolving manufacturing industry.

INDUSTRY-DRIVEN: The programs are developed and driven by leading manufacturing companies in collaboration with educational institutions.

DUAL EDUCATION SYSTEM: The ICATT apprenticeship programs combine on-the-job training with classroom instruction.

COMPETENCY-BASED CURRICULUM: The program follows a competency-based curriculum, focusing on specific skills and knowledge required for various job roles in the manufacturing industry.

LONG-TERM COMMITMENT: The Apprenticeship Programs typically span three years, providing a comprehensive and in-depth training experience.

SUPPORTIVE NETWORK: The programs provide a supportive network for apprentices and companies, including mentorship, best practice exchange, and resources to help them succeed.

CAREER OPPORTUNITIES: Upon successful completion of the ICATT apprentices can secure full-time employment with the host company.



ICATT

APPRENTICESHIP PROGRAM

& AFFILIATE PROGRAMS



ABOUT GACC MIDWEST

The **German American Chamber of Commerce® of the Midwest (GACC Midwest)**, headquartered in Chicago with a branch office in Detroit, was founded in 1963. GACC Midwest is an integral part of the German Chamber Network (AHKs) with 150 offices in 93 countries around the globe. Our continuing mission is to promote German-American business relations and to support trade and investment between Germany and the United States, especially the Midwest. Our organization combines elements of a trade commission, a membership association, and professional consulting services for market entry, apprenticeships in the US, and more. With this unique concept in international trade promotion,

GACC Midwest's territory covers 14 US states: the 12 of the Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin), including Colorado and Kentucky, comprising together approximately one quarter of the nation's geographical area, its population, and its GDP. GACC Midwest's headquarters, which we share with Germany Trade and Invest (GTAI), is located in the heart of downtown Chicago. Our Michigan office is located just outside of Detroit to better serve the German-American business community in Michigan and the neighboring states.



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