

ATTENDEE CHECK-IN CODE

FJYC



Christiani

We train ahead



JOBS NEED PEOPLE

CAREERS NEED CTE (CAREER TECHNICAL EDUCATION)

Andreas Brockmann

We have enough people who want to build a career, but we need to offer them the opportunities.

ACTE CONFERENCE - JULY 20-22 COLUMBUS, OH

WHY - WHAT – HOW BUILDING THE FUTURE WORKFORCE

ACTE CONFERENCE JULY 2026

WORK-BASED LEARNING
CAREER TECHNICAL EDUCATION



MAIKEN KAYSER

Area Sales Manager North & Latin America

Dr.-Ing. Paul Christiani GmbH & Co. KG

Christiani

We train ahead

I am an internationally experienced professional in German-American economic relations. For the past eleven years, I have been working in international sales and project coordination at Christiani, a leading provider of technical education, qualification, and practice-oriented training systems. Before that, I worked at the AHK Chile, supporting German companies in entering the Chilean market.

From my perspective, **dual vocational training is one of the strongest and most sustainable qualification systems worldwide**. Its particular strength lies in the integration of theory and practice, which supports learners not only in developing technical skills but also in strengthening workplace culture and personal competencies. It creates genuine employability, fosters responsibility, independence, and teamwork, and enables companies to develop their skilled workforce in a targeted and high-quality manner. Especially in an international context, it becomes clear that dual vocational training is far more than an education system: **it is an economic success factor. It connects companies, schools, and learners through a shared commitment to quality and generates measurable benefits for innovation, productivity, and competitiveness.**

Successful vocational training
comes from the **close integration
of theory and practice**



The Company Christiani

Facts and Figures

Christiani

We train ahead

Employees



Currently about
250 employees

Products



About 15,000 products
in total incl. own R&D
and manufacturing

Customers



Over 70,000 customers
in about 80 countries
worldwide

Revenue



Approx. 38 Mio €
revenue per year

Partners and Memberships

Well connected in Education in Industry and Institutions

Christiani

We train ahead

KUKA

SIEMENS

rexroth
A Bosch Company

Audi

BOSCH

SMC

AVENTICS

ARDUINO
EDUCATION

fischer
technik

LEGO
education

TÜVRheinland

DAIMLER

VOLKSWAGEN
Coaching

wilo

didacta
Verband der Bildungswirtschaft

JÜLICH
Forschungszentrum

biBB
Bundesinstitut für
Berufsbildung

AHK
German
Chambers of Commerce
Worldwide Network

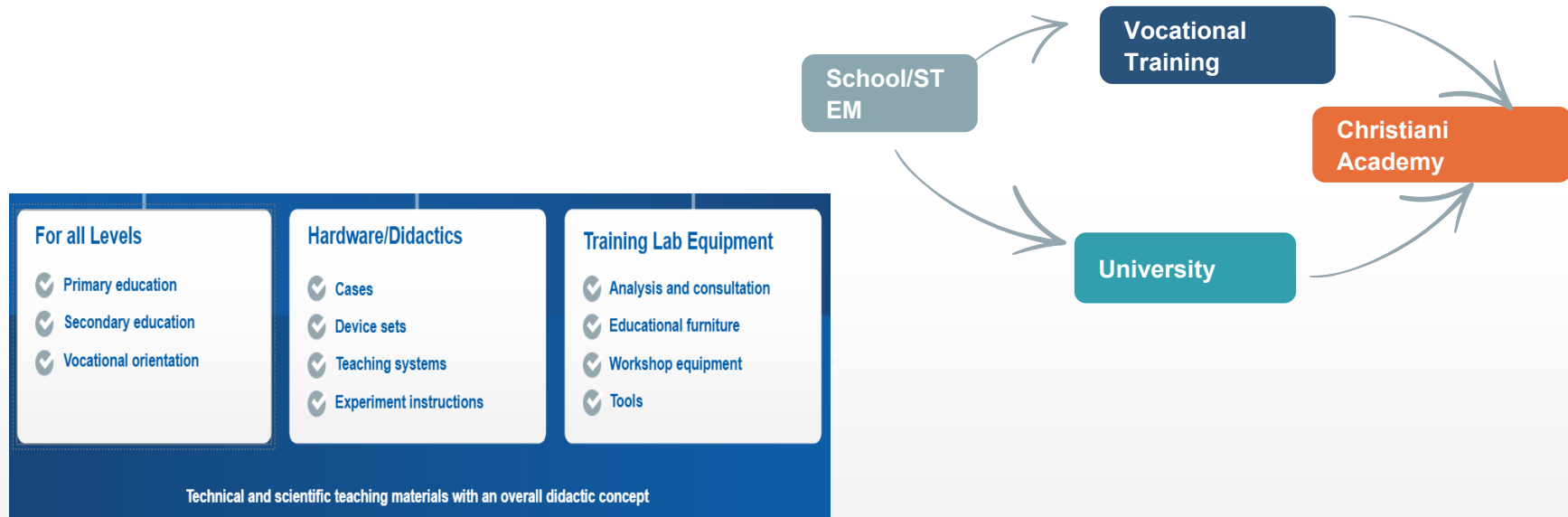
KIT
Karlsruhe Institute of Technology

The Complete Offer

Technology from the Beginning – since 1931

Christiani

We train ahead





CHAD BRIDGMAN

Director of Adult Education & Workforce Development
WARREN COUNTY CAREER CENTER



I am a strategic leader in workforce development with over a decade of experience bridging the gap between education and industry.

As the Director of Adult Education and Workforce Development at the Warren County Career Center, I serve as the primary liaison between local businesses and the skilled talent emerging from WCCC's programs.

My expertise is rooted in my time at Sinclair Community College, where I founded the Office of Work Based Learning. During my tenure, I connected hundreds of students with industry leaders and secured more than \$5 million in grant funding to expand work-based learning opportunities.

My work focuses on preparing individuals for in demand careers, helping ensure that local manufacturing, technology, and healthcare employers have a strong pipeline of qualified professionals.

Beyond my professional role, I am committed to supporting education and workforce initiatives throughout the region. I currently serve as a member of the Warren County ESC Governing Board, where I contribute to local governance and education policy.

One District. One Program. One Mission.

Successful vocational training through a unified approach that benefits all stakeholders.



WARREN COUNTY CAREER CENTER



Warren County Career Center (WCCC) is a public career-technical school in Lebanon, Ohio.

We've been shaping student futures since 1976 – that's 50 years of real-world education!



21

High School Programs

900+

Students per Year

5,200

Satellite Students

8

Post-Secondary Programs

325+

Post-Secondary Students per Year

POSITIVE DISRUPTION, IS A GOOD DISRUPTION!



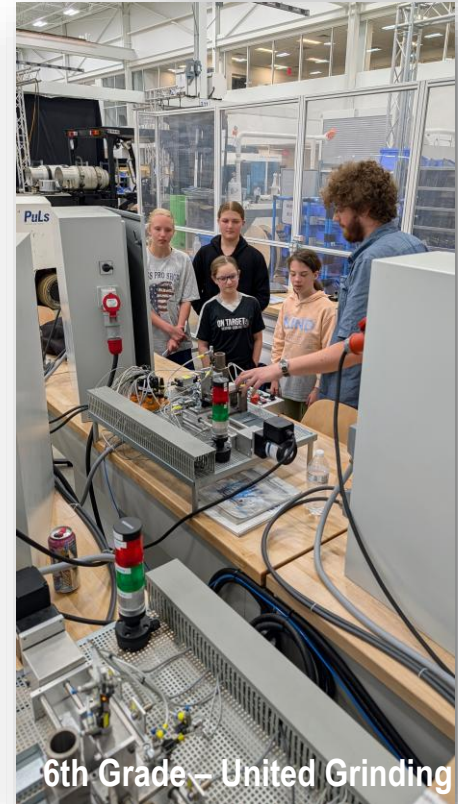
Kindergarten – Vega, Germany



4th Grade – WCCC



6th Grade – United Grinding



6th Grade – United Grinding



Andreas Brockmann

Apprenticeship Coordinator
United Grinding North America

Expertise:

- Workforce Development
- Apprenticeship Program Design
- Curriculum Design
- Dual Education Programs
- Pre-Apprenticeship & Apprenticeship design & Implementation
- Technical Education in Manufacturing & Educational environments
- Culture & Change Management
- Mentor development
- Manufacturing Relocation
- Performance Improvement
- Production Increase Optimization
- Quality Improvement
- Production Cost Reduction Optimization
- Automation & Digitalization
- Digital transformation in Manufacturing
- Shop floor setup for training and Students
- Industrial Engineering & Technology
- Industry 4.0 / IIoT

I am an Engineer and Educator with over 30 years' experience in automation (21 yrs. SaraLee - Germany / 11 yrs. Sculptz - SC). He holds a Bachelor of Science degree in Mechanical Engineering Technology, a Technical Business and Management degree, as well as an Apprenticeship Instructor Certification (AdA-Ausbilderschein) from IHK - Münster, Germany.

My expertise is in developing dual training programs what contributed to the successful development of the workforce in various manufacturing companies. My incredible proficiency made me the go to person for any work-related education programs.

Previously I served as Director of the Altix Academy at Altix Consulting - Mason, OH, an international manufacturing consulting firm. Before that I worked as Head of Technical Training & Education, U.S. for Festo Didactic - Mason, OH and in the Engineering Division at York Technical College - Rock Hill, SC as the Department Chair for Industrial Maintenance Technology (IMT), Mechatronic & Welding, where I created a unique associate degree with a curriculum tailored to specific requirements of industry partners in the Charlotte, NC area.

I am a past board member of the Emerging Workforce Committee Chair of the Workforce Investment Board, Butler, Clermont, Warren County (Area12) - OH, a past member of Examination Board of Mechatronic Technician of the German American Chamber of Commerce (GACC) of the Midwest, a Austrian, Swiss, German (ASG) committee member of the European American Chamber of Commerce (EACC) - Cincinnati, OH, serving on the Education & Training Committee at the Workforce Council of Southwest Ohio, and an active member and former President at Rotary Int. - Lancaster, SC.

I am a German native and US citizen by choice, I live in Dayton, Ohio



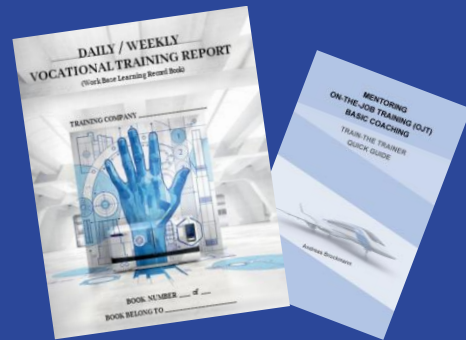
National Workforce Development
September 2025



Marquise Who is Who
Aug. 2025



DAYTON BUSINESS
JOURNAL Oct. 2025



Author of the books :
MENTORING ON-THE-JOB-TRAINING - BASIC COACHING
&
THE DAILY / WEEKLY VOCATIONAL TRAINING REPORT



FALL 2025



THE UNITED STATES DEPARTMENT OF LABOR
Oct.2024



KEY INDUSTRIES & CUSTOMERS



Raytheon (Defense)



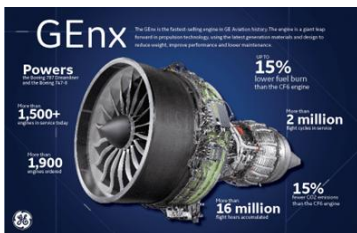
Strong relationships with industry-leading customers across serviced end-markets



Lincotek (Medical)



GE Aerospace (Aerospace)



Honda (Automotive)

Allied Machine and Engineering (Cutting Tools)

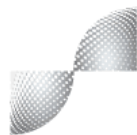


EMPLOYER COMMUNITY OF PRACTICE FOR APPRENTICESHIPS (COP)



VEGA

Vega Americas



Silfex

A Lam Research Company

Silfex

ADVICS

Advics



STÖBER

Stober

RH Aero

RH Aero Systems

Rhinestahl
HYDRO



CBT Company



Givaudan

acceleration

Accelelevation, LLC.

GROB

Grob



**UNITED
GRINDING**

United Grinding



Dayton-Phoenix Group

There are about **20 distinct shapes** for screw heads,
but fewer than 10 are commonly used.

To cover the vast majority of jobs
—from assembling furniture to electrical work—
you only need to know about the following
7 standard types of screwdriver heads:

THE BIG 7 (MOST COMMON)

A survey recently revealed 30% of Gen Z-ers (14- to 29-year-old) can't identify a screwdriver.



THE BIG 7 (MOST COMMON)



Slotted (Flathead): A single flat blade. It is the most basic and oldest type of screwdriver, typically used for woodworking and basic hardware.

Phillips: A cross-shaped head with four tapered points. The #2 size is the most widely used screwdriver in household tasks.

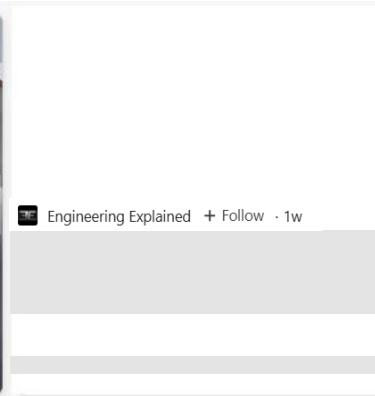
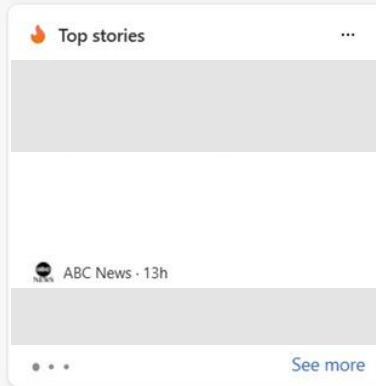
Torx (Star): A 6-pointed star shape. These offer high torque and are standard in electronics, automotive, and power tools.

Robertson (Square): A distinct square-shaped tip. Frequently used in woodworking and framing, especially in Canada.

Hex (Allen Key): A 6-sided (hexagonal) recess. Very common for flat-pack furniture, bicycles, and machinery.

Pozidriv: Very similar to a Phillips but features 4 additional, smaller ridges. It provides a much stronger grip and prevents "cam-out" (slipping).

Tri-Wing: Used mostly in aerospace and electronics to prevent tampering.



Baby Boomers (born 1946–1964)
Gen. X (approx. 1965–1980)
Gen. Y / Millennials (approx. 1981–1996)
Gen. Z / Zoomers (approx. 1997–2011)
Gen. α Alpha (approx. 2012–mid 2024)
Generation β Beta (approx. 2025-2039)



US HIGH SCHOOL GRADUATES PEAK AROUND 3.8 MILLION IN 2019

3.9 MILLION IN 2025

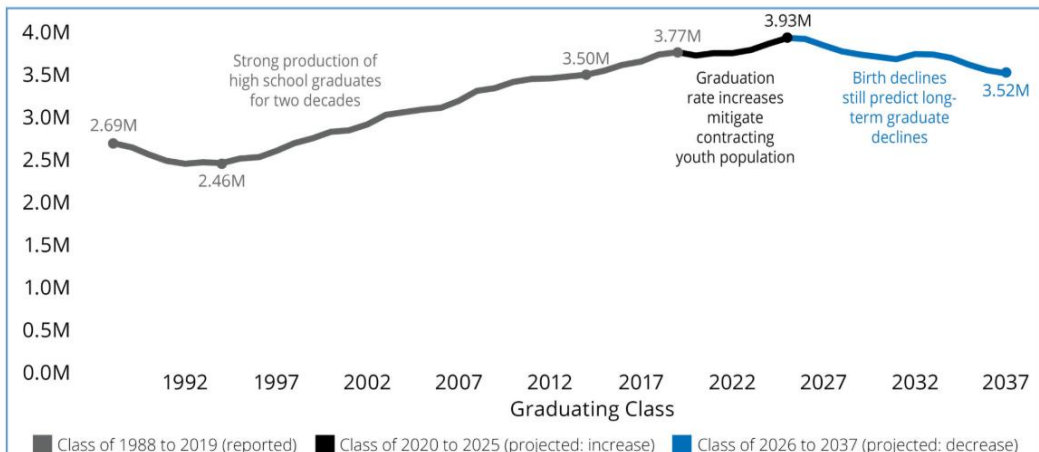
PREDICTED 3.5 MILLION IN 2037

Between 110,000-127,000 in Ohio



Christiani

We train ahead



Source: Western Interstate Commission for Higher Education, *Knocking at the College Door*, 10th edition, 2020. See [Technical Appendix](#) for detailed sources of data through the Class of 2019; WICHE projections, Class of 2020 through 2037.

Rates of immediate enrollment of high school graduates in a postsecondary institution

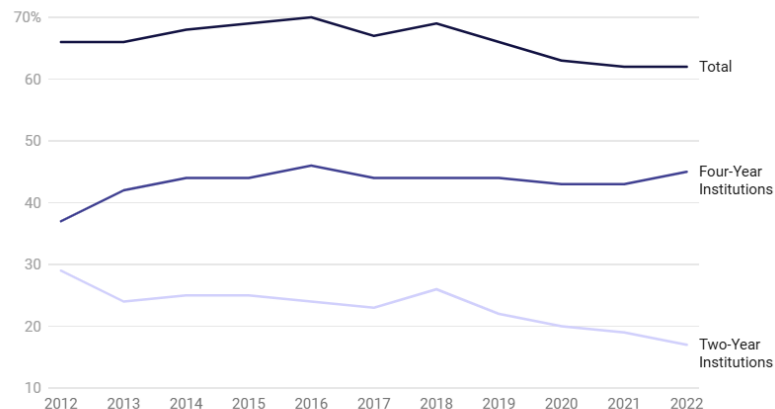


Chart: Ben Unglesbee/Higher Ed Dive • Source: WICHE, based on U.S. Department of Commerce data • [Get the data](#) • Created with [Datawrapper](#)

REALITY

**85/88 Ohio counties
experienced **positive growth**
in the 25-44 age group
since 2020.**



Source: U.S. Census Bureau, ODOT
Data Tables: DP1 (2020 Decennial) DP05 (2023 ACS 5Y Estimates)

JobsOhio

JobsOhio 2025 Q4 Board of Directors Meeting

Despite the U.S. seeing 3.8 million new manufacturing jobs by 2033, according to Deloitte and the Manufacturing Institute, the younger generation of workers has largely turned away from the career path. And as some ditch college degrees, Gen Z enrollment in trade schools is on the rise, but the newest generation entering the workforce is largely avoiding factory jobs, citing low wages, according to a 2023 Soter Analytics study. U.S. manufacturing jobs in the U.S. have an average \$25-per-hour wage—about \$51,890 per year—falling short of the average American salary of \$66,600.

APPRENTICESHIP PROGRAMS

WHY - WHAT - HOW



The purpose is to:

- Develop job-ready technical skills
- Bridge the gap between classroom learning and real industrial work
- Support trainers and vocational schools
- Ensure apprentices meet industry and examination requirements
- Train skilled workers according to vocational education standards

WHY, THIS IS NEEDED.

- TALENT SHORTAGE
- NEW TALENT
- SKILLS GAP
- INDUSTRY PARTICIPATION GAP
- FUTURE WORKFORCE NEED
- BUSINESS GROWTH
- LONG-TERM STABILITY AND REDUCING TURNOVER

UG

Average length of tenure: 10 years

Turnover 17.67% in 2025 (Industry average 28.6%)

HIRING NEW TALENT



Filling Skill “Gaps” and Diversifying Expertise: Hiring new “young” talent can be an effective way to introduce specific hard or soft skills that are missing from your current team. This can sometimes be more efficient than training existing staff for entirely new roles.

Just as the new hire will help ease your workload, they can take weight off the entire team’s shoulders by providing strategic and knowledgeable support. Burnout is prevalent in understaffed, fast-paced environments, but your whole team can work more confidently knowing they have support if they need it.

Plus, having this new powerhouse on your team can even create more room for employee development. Instead of spreading yourself too thin, you can now delegate crucial tasks to your new hire. The free time this opens up can be put to use in mentoring employees, leading to a stronger team all around.

Strategic hiring of the right people initially can significantly reduce future employee turnover, saving time and money on constant recruitment and training costs.

Improving Team Dynamics and Morale: The right new hire can have a positive “ripple effect” on the rest of the team, boosting morale, improving collaboration, and inspiring others to perform well. They help build a stronger, more cohesive work environment.

Introducing New Perspectives and Innovation: New employees, especially external hires, bring fresh ideas, diverse experiences, and innovative approaches to existing problems. This can challenge current practices, foster creativity, and provide a competitive advantage.

With additional support and a stronger team in place, productivity will likely skyrocket, yielding new opportunities, innovations, and even expansion.

TYPES OF WORK-BASED LEARNING



Christiani

We train ahead

	Dimension	Job Shadowing	Pre-Apprenticeship	Internship	Co-Op	Registered Apprenticeship
Employer Perspective	Employer Role	Host	Inform	Supervise	Develop	Employ & Train
	Employer Investment	Career Exposure	Talent Advising	Supervised Work Experience	Structured Talent Development	Long-Term Workforce Development
	Workforce Value	Awareness	Candidate Readiness	Talent Evaluation	Pipeline Development	Workforce Creation
	Hiring Intent	Awareness Only	Potential Future Pipeline	Evaluate Potential Hires	Evaluate and Develop Potential Hires	Direct Workforce Development
	Employer Benefit	Increase career field awareness and company visibility	Expand and prepare future talent pools	Build and assess talent before hiring	Build a pipeline of emerging talent with relevant skills	Develop and retain occupation-specific talent
Learner Perspective	Primary Purpose	Career Awareness	Career Preparation	Career Exploration & Skill Building	Academic & Career Development	Occupation-Specific Talent Development
	Learner Experience	Observe work, job tasks, and workplace culture	Develop foundational skills, credentials, and workplace readiness	Perform supervised work and apply skills	Alternate classroom learning with paid work experience	Earn while learning through structured on-the-job training and related instruction
	Compensation	Unpaid	Varies	Typically Paid	Typically Paid	Paid Employment
	Typical Duration	Hours to Days	Weeks to Months	Weeks to Months	Semester(s)	1-4 Years

An apprenticeship is the only program that begins with a salary, provides remuneration throughout its entire duration, and ends with a salary.

Andreas Brockmann

APPRENTICESHIP PROGRAMS

WHY - WHAT - HOW



Christiani provides didactic materials and training systems for vocational education and apprenticeships, especially in technical fields such as:

- Electrical engineering
- Mechatronics
- Metalworking
- Automation technology
- Automotive technology
- Renewable energy systems

The materials include:

- Textbooks and reference books
- Workbooks and training manuals, E-learning modules
- Practical training systems and laboratory equipment
- Examination preparation materials



WHAT, WAS NEEDED.

- AN AUTHENTIC PARTNERSHIP
 - COLLEGE EDUCATION
 - COLLEGE DEGREE
 - STRONG FOUNDATION
 - ALREADY REGISTERED PROGRAM
 - CAREER PATHWAYS





COMPANY-PAID COLLEGE EDUCATION



▮ **UGA apprentices are registered with Sinclair College in Dayton Ohio in the following Associate degree program:**

▮ Electro-Mechanical/ Mechatronic Engineering Technology

▮ **Tuition is paid for 100% by UG**

▮ **Work/Class Schedule:**

▮ 3 days per week at UG

▮ 2 days per week at Sinclair

▮ **Earn while you learn!**

▮ Paid a full 40-hour week

(even while attending class at Sinclair!)



ALREADY REGISTERED PROGRAM



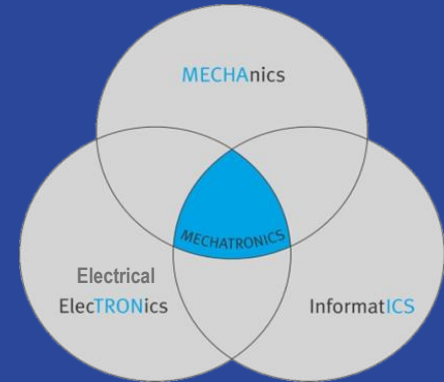
▮ United Grinding (UG)'s goal is to grow our future workforce from within the company

▮ Four types of apprenticeship paths in one program:

- ▮ Mechanical ▮ Electronic
- ▮ Electrical ▮ Informatic

▮ 4-year commitment includes **2 years of training**
+ 2 years of workforce placement/training

- ▮ On-the-job training
- ▮ Hands-on learning experiences
- ▮ College education





APPRENTICESHIP PROGRAMS

WHY - WHAT - HOW



Christiani's approach combines theory and practice. Apprentices learn concepts through:

- **Learning materials (books, digital content, tutorials)**
- **Hands-on exercises using training equipment**
- **Structured practical assignments**
- **Interactive e-learning and self-paced study**
- **Preparation aligned with German vocational training and examination standards**

HOW, WE DID IT.

- MET IN MAY, LAUNCHED PROGRAM WITH 4 APPRENTICES IN AUGUST
- USING EXISTING CURRICULUM / DEGREE
- SET UP IN-HOUSE TRAINING SPACE
- START WITH BASIC TECHNICAL TRAINING

TAKE CARE OF YOUR BIGGEST ASSET



Hiring younger people can bring numerous benefits to an organization:

Fresh Perspectives and Innovation: Young employees often bring new ideas, comfort with emerging technologies, and different ways of thinking that can challenge existing practices and foster innovation.

Digital Native Skills: Millennials and Gen Z have grown up with technology and can help organizations stay current with the latest digital tools, social media trends, and software applications.

Long-Term Investment: Hiring young talent is a long-term investment, as these individuals have the potential to grow with the company and eventually move into leadership positions.

Diversity and Inclusion: A multi-generational workforce promotes a more diverse and inclusive environment, reflecting the broader population and customer base.

While these are compelling reasons, it's also important to note that a balanced, multi-generational workforce that leverages the strengths of both younger and older employees often yields the best results

To successfully integrate young employees (primarily Gen Z and Millennials), companies should implement strategies focusing on mentorship, clear growth paths, flexible work environments, purpose-driven culture, and continuous feedback.

Key strategies for effective integration include: Professional Development and Growth

Mentorship Programs: Pair junior employees with experienced colleagues for guidance, networking, and knowledge transfer. A significant majority of young workers view mentorship as crucial for their careers.

Clear Career Pathways: Define and communicate explicit, transparent steps for promotion and skill development. Young employees value knowing how they can advance and often cite a lack of advancement opportunities as a reason for leaving.

Continuous Learning Opportunities: Offer formal training, workshops, and access to external courses or conferences. Provide opportunities for cross-training so employees can acquire new skills and explore different areas of the business.

Apprenticeship & Shadowing: Create formal programs allowing junior members to observe senior colleagues in action (e.g., customer meetings, complex problem-solving sessions) and follow up with structured debriefing sessions.



Studer S141 internal grinding Maschine

WHAT, NOT TO DO



WHAT, NOT TO DO. IF YOU WORK WITH A TRAINING PROVIDER TOGETHER

- ONE SIDE PARTNERSHIP
- SPECIAL MACHINE / TECHNOLOGY TRAINING
- NON-FLEXIBLE CLASS SCHEDULES
- CUSTOMIZED TRAINING FOR ONE CUSTOMER ONLY
EVERY BUSINESS IS DIFFERENT
- TRY TO KEEP UP WITH TECHNOLOGY



Studer S141 internal grinding Maschine

CULTURE AND COMMUNICATION



Open and Transparent Communication: Foster an environment where open dialogue is encouraged and employees feel their voices are heard. Be clear and direct in communication, avoiding vague language.

Regular, Constructive Feedback: Move away from annual reviews and adopt a system of continuous, real-time feedback and regular check-ins. This generation appreciates frequent guidance to help them improve and grow.

Recognition and Praise: Regularly acknowledge and celebrate individual and team accomplishments, both large and small. Recognition programs can significantly boost morale and motivation.

Purpose-Driven Work: Clearly articulate the company's mission, vision, and values, and show how each role contributes to the broader goals and societal impact.

Diversity, Equity, and Inclusion (DEI): Cultivate a culture of belonging by implementing equitable policies, diversifying leadership, and establishing employee resource groups. Work Environment and Well-being

Flexibility and Work-Life Balance: Offer flexible hours and hybrid or remote work options. ~~Young~~ ^{ALL} employees highly value flexibility and work-life integration.

Positive and Collaborative Culture: Encourage teamwork, creativity, and knowledge-sharing in a supportive environment where honest mistakes are viewed as part of learning and growth.

Embrace Technology: Utilize modern digital tools and project management software (like Slack or Asana) to streamline workflows and improve communication, leveraging young employees' digital proficiency.

Focus on Well-being: Integrate mental health support, wellness programs, and a culture that encourages taking necessary time off into the workplace fabric

JOBS NEED PEOPLE
CAREERS NEED CTE (CAREER TECHNICAL EDUCATION)

Andreas Brockmann



THANK YOU

STAY IN CONTACT



ATTENDEE CHECK-IN CODE

FJYC



Andreas Brockmann

Apprenticeship Coordinator

andreas.brockmann@grinding.com

Tel. +1-937-388-7648



Maiken Kayser

Sales Manager N&S America

maiken.kayser@christiani.de

Tel. +49-7531-5801 Ext. 234



Chad R. Bridgman

Director of Adult Education & Workforce Development

chad.bridgman@mywccc.org

Tel. +1-513-932-5677 Ext. 5381

